National Energy Board | Office national de l'énergie

Reasons for Decision

Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP and Enbridge Pipelines Inc.

OH-3-2007

February 2008

Facilities

Canada

2008-02901/

National Energy Board

Reasons for Decision

In the Matter of

Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP and Enbridge Pipelines Inc.

Application dated 9 March 2007 for the Southern Lights Project consisting of the:
1. Diluent Pipeline Project; and
2. Capacity Replacement Project.

OH-3-2007

February 2008

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Glossary of Terms, Acronyms and Abbreviations

Southern Lights Project	Two projects, more properly described as: 1. Diluent Pipeline Project consisting of the: a) Transfer of Line 13; b) Line 13 Reversal; and 2. Capacity Replacement Project consisting of the: a) Line 2 Modifications b) Light Sour Pipeline
Alberta Clipper Project	Alberta Clipper Expansion Project
Annual capacity	The average daily rate that the pipeline system is able to generate on an annual basis.
API	American Petroleum Institute
Applicants	Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP and Enbridge Pipelines Inc.
Apportionment	The method of allocating the difference between the total shipper nominated volume on Enbridge Pipelines Inc.'s mainline and the available pipeline operating capacity, where the latter is smaller.
bbl/d	barrel(s) per day
Board or NEB	National Energy Board
CAPP	Canadian Association of Petroleum Producers
CE	carbon equivalent
CEA Act	*Canadian Environmental Assessment Act*
CEA Agency	Canadian Environmental Assessment Agency
CEP	Communication Energy and Paperworkers Union of Canada
Certificate	Certificate of Public Convenience and Necessity
Committed shippers	Shippers that have executed a Transportation Service Agreement that provides for the transportation of a stated daily volume for an initial term of 180 calendar months on the reversed Line 13.
CSA	Canadian Standards Association

CSA Z662	Latest applicable version of the CSA standard Z662, Oil and Gas Pipeline Systems, as amended from time to time
CSA Z662-03	CSA standard Z662, Oil and Gas Pipeline Systems, 2003
CSA Z662-07	CSA standard Z662, Oil and Gas Pipeline Systems, 2007
Dakota Nations of Manitoba	Dakota Nations of Manitoba (On behalf of Birdtail Sioux First Nation, Canupawakpa Dakota Nation, Dakota Plains First Nation, Dakota Tipi First Nation and Sioux Valley Dakota Nation)
dilbit	A blend of condensate and *in situ* bitumen primarily used in heavy crude refineries.
DRA	drag reducing agent
EA	engineering assessment
EPI	Enbridge Pipelines Inc.
EPP	Environmental Protection Plan
ERP	Emergency Response Plan
ERW	electrical resistance weld
ESL	Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP
ESR	Environmental Screening Report
FA(s)	Federal Authority as defined in subsection 2(1) of the *Canadian Environmental Assessment Act*
ha	hectare(s)
ILI	in-line inspection
IMP	Integrity Management Program
INAC	Indian and Northern Affairs Canada
Interim Period	the period between the in-service date for the Capacity Replacement Project and the closing date for the Line 13 transfer
Keystone	TransCanada Keystone Pipeline GP Ltd.
km	kilometre(s)
KP	kilometre post
kPa	kilopascal(s)

Line 2 Modifications	Proposed modifications to Line 2 outlined in section 5.1.1 of the Reasons.
Line 13	Line 13 pipeline and related facilities
Line 13 Transfer	Transfer of the Canadian portion of Line 13 from EPI to Enbridge Southern Lights LP in accordance with an agreement between EPI and Enbridge Southern Lights LP dated 9 March 2007.
Line 13 Reversal	Removal of Line 13 from southbound crude oil service and reversal of Line 13 to transport diluent from the Canada/US border near Gretna, Manitoba to Edmonton, Alberta
LSr Pipeline	Light Sour [crude oil] Pipeline and related facilities
LSr Station Facilities	LSr Pipeline pumping and related facilities and pump station piping at three existing EPI pump station sites
LVP	low vapour pressure
m	metre(s)
mm	millimetre(s)
MBS	material balance system
m^3/d	cubic metre(s) per day
MOP	maximum operating pressure(s)
MPLA	Manitoba Pipeline Landowners Association
NEB	National Energy Board
NEB Act	*National Energy Board Act*
NDE	non-destructive examination
NGL	Natural Gas Liquids
NPS	nominal pipe size (in inches)
OD	outside diameter
OPR-99	*Onshore Pipeline Regulations, 1999*
OPUAR	*Oil Pipeline Uniform Accounting Regulations*
Peepeekisis	Peepeekisis First Nation
PIP	Preliminary Information Package
PPBoR	plan, profile and book of reference

Project	Southern Lights Project
RA(s)	Responsible Authority as defined in subsection 2(1) of the *Canadian Environmental Assessment Act*
RoW	right-of-way
Roseau River	Roseau River Anishinabe First Nation
RTTM	real-time transient model
SAPL	Saskatchewan Association of Pipeline Landowners
SCADA	supervisory control and data acquisition
SCC	stress corrosion cracking
Shipper	The party that contracts or nominates with a pipeline for transportation service.
SMAW	shielded metal arc welding
Standing Buffalo	Standing Buffalo Dakota First Nation
synbit	synthetic bitumen
Transfer Agreement	Agreement between EPI and Enbridge Southern Lights LP dated 9 March 2007 for the transfer of Line 13.
TSA	Transportation Service Agreement
US	United States of America
USCD	ultrasonic crack detection
WCSB	Western Canadian Sedimentary Basin

Recital and Appearances

IN THE MATTER OF the *National Energy Board Act* and the Regulations made thereunder; and

IN THE MATTER OF an application under file number OF-Fac-Oil-E242-2007-01 01 by Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL), and Enbridge Pipelines Inc. (EPI), collectively the Applicants, dated 9 March 2007 for:

a) Diluent Pipeline Project

1. Leave to be granted to EPI pursuant to subsection 74(1)(a) of the *National Energy Board Act* (NEB Act), to sell Line 13 and such other orders, pursuant to Part IV and section 20 and subsection 129(1.1) of the NEB Act, which are necessary to effect the transfer of Line 13 in accordance with the terms and conditions set out in the Transfer Agreement.

2. Leave to be granted to ESL pursuant to subsection 74(1)(b) of the NEB Act, to purchase Line 13 and such other orders pursuant to Part IV and section 20 and subsection 129(1.1) of the NEB Act, which are necessary to effect the transfer of Line 13 in accordance with the terms and conditions set out in the Transfer Agreement.

3. An order to be granted to EPI pursuant to section 58 of the NEB Act, authorizing the construction and operation of the Line 13 Reversal facilities and exempting these facilities from the provisions of sections 30, 31 and 47 of the NEB Act.

4. Approval to be granted to EPI under Part IV of the NEB Act, for the toll principles and the tariff that will apply to the transportation of diluent on the Line 13 Reversal.

b) Capacity Replacement Project

1. A Certificate of Public Convenience and Necessity to be issued to EPI pursuant to section 52 of the NEB Act, authorizing the construction and operation of the LSr Pipeline.

2. An order to be granted to EPI pursuant to section 58 of the NEB Act exempting the pumping facilities, related facilities and pump station piping associated with the LSr Pipeline from the provisions of subsections 30(1)(b), 31(c), 31(d) and section 47 of the NEB Act, upon the issuance of a Certificate for the LSr Pipeline.

3. An order to be granted to EPI pursuant to section 58 of the NEB Act authorizing EPI to construct and operate the Line 2 Modification facilities and exempt these facilities from the provisions of sections 30, 31 and 47 of the NEB Act.

4. Approval to be granted to EPI under Part IV of the NEB Act for the tolling methodology to apply to the Line 2 Modifications and the LSr Pipeline prior to the transfer of Line 13 from EPI to ESL.

AND IN THE MATTER OF National Energy Board Hearing Order OH-3-2007 dated 17 April 2007;

HEARD in Calgary, Alberta on 13 and 14 August 2007, 29 and 31 October 2007 and in Regina, Saskatchewan on 20 and 21 August 2007;

BEFORE:

S. Crowfoot	Presiding Member
K. Batemen	Member
S. Leggett	Member

Appearances	**Company**	**Witnesses**
Mr. D.G. Davies Mr. T. Hughes Ms. H. Long Mr. E. Dixon	Applicants	Ms. K. McShane Mr. J. Glanzer Mr. M. Thompson Mr. R. Fisher Mr. N. Earnest Mr. M. Sitek Ms. J. Whitney Mr. L. Neis Mr. L. Zupan Ms. G. Feltham Mr. K. Gilmore Mr. G. Herchak Mr. J. Gerez Mr. W. Forbes Mr. R. Wight Mr. J. Paetz Ms. T. Petter
Mr. N. J. Schultz Mr. L. Manning	Canadian Association of Petroleum Producers	
Ms. C. G. Worthy	BP Canada Energy Company	
Ms. C. Fredericks	ConocoPhillips Canada Limited	
Mr. D.A. Holgate	Statoil North America, Inc.	
Mr. J. Van Heyst	Suncor Energy Marketing Inc.	

Appearances	Company	Witnesses
Ms. J. Scott	TransCanada Keystone Pipeline GP Ltd	
Mr. S. Shrybman	Communications, Energy and Paperworkers Union of Canada	Mr. J.E. Wilson
Mr. M. Phillips	Standing Buffalo Dakota	Chief Roger Redman
Ms. M. Rasmussen, Q.C.	First Nation	Elder Dennis Thorne Elder Cliff Tawiyala Elder Wayne Goodman
Ms. K. Lozynsky Mr. P. Enderwick	National Energy Board	

Chapter 1

Introduction

1.1 Background

On 9 March 2007, Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL) and Enbridge Pipelines Inc. (EPI), collectively the Applicants, applied to the National Energy Board (NEB or the Board) for approvals related to the Southern Lights Project (Project).

This Project consists of two components:

1) a Diluent Pipeline Project; and

2) a Capacity Replacement Project.

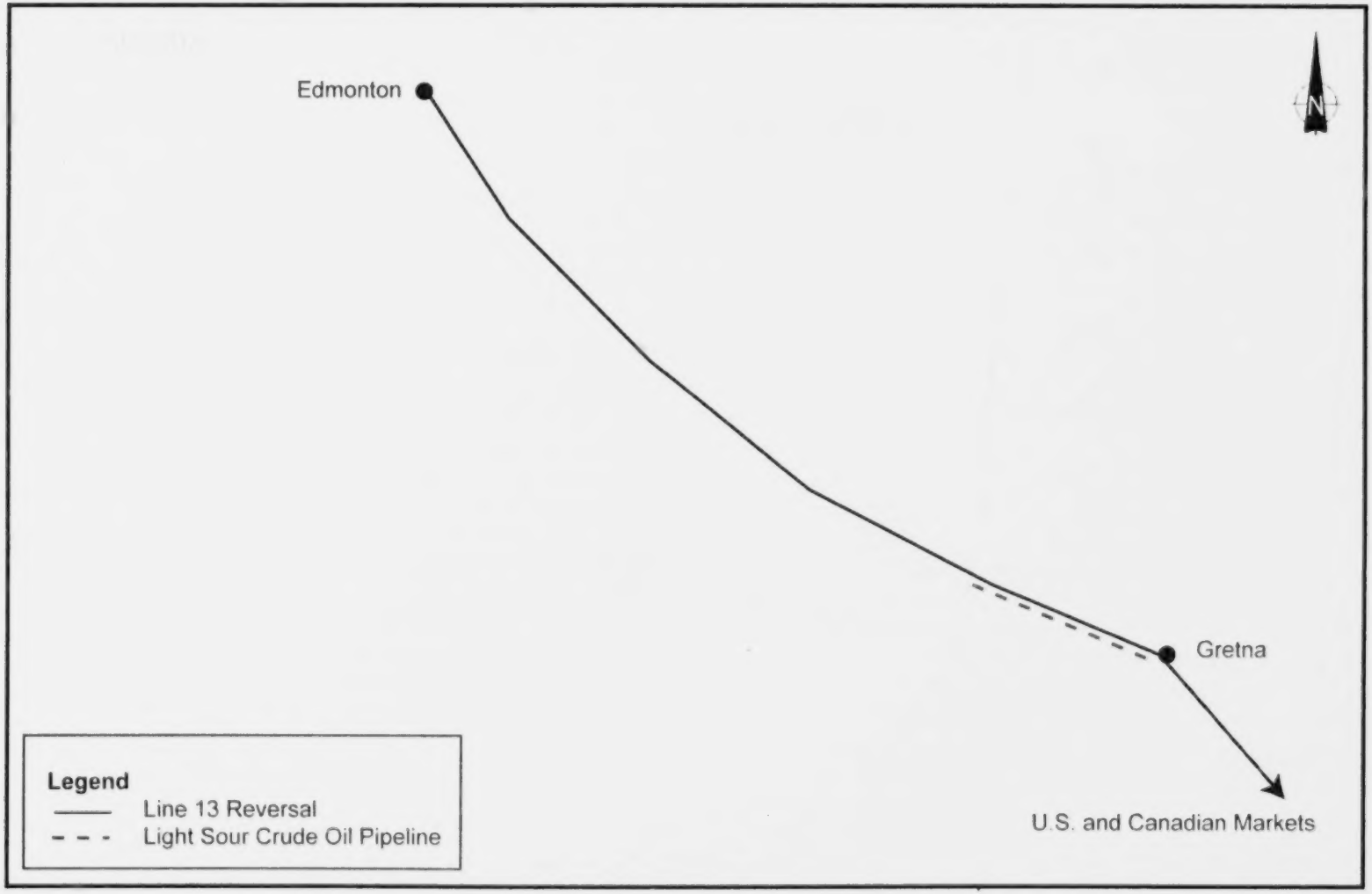
1.2 Diluent Pipeline Project

The Diluent Pipeline Project involves the transfer of the Canadian portion of Line 13 from EPI to ESL (Line 13 Transfer) in accordance with a Transfer Agreement dated 9 March 2007 (Transfer Agreement) and therefore requires leave pursuant to section 74 of the *National Energy Board Act* (NEB Act) as well as an order pursuant to subsection 129(1.1). EPI's Line 13 would be removed from southbound crude oil service and reversed to transport diluent from the Canada/US border near Gretna, Manitoba to Edmonton, Alberta (Line 13 Reversal) (see Figure 1-1). No new pipeline or pumps would be required in Canada as part of the Line 13 Reversal and all work would occur within existing Line 13 pump station and valve sites. ESL has applied for a section 58 order and approval under Part IV of the NEB Act in relation to the Line 13 Reversal.

1.3 Capacity Replacement Project

The proposed Capacity Replacement Project would offset the reduction of southbound crude oil capacity on the EPI Mainline system resulting from the Line 13 Reversal and would consist of the construction of a 288 km, 508 mm OD (NPS 20) light sour pipeline (LSr Pipeline) from Cromer, Manitoba to the Canada/US border near Gretna, Manitoba, including the addition of pumping and related facilities and pump station piping at three existing EPI pump station sites (LSr Station Facilities) and modifications to Line 2 (Line 2 Modifications). EPI has applied under the NEB Act, pursuant to section 52 for a Certificate to construct and operate the LSR Pipeline and for two section 58 orders related to the LSr Station Facilities and Line 2 Modifications. EPI has also asked for approval under Part IV of the NEB Act for the tolling methodology to apply to the Line 2 Modifications and the LSr Pipeline prior to the transfer of Line 13 from EPI to ESL and the Line 2 Modifications.

Figure 1-1
Southern Lights Project



1.4 Regulatory Context

On 14 November 2006, the Applicants filed a Preliminary Information Package (PIP) respecting the Project. The purpose of the PIP was to initiate and facilitate an efficient regulatory review of the Project and enable the Board and other federal departments to determine their respective environmental assessment responsibilities and the scope of the assessment under the Canadian Environmental Assessment Act (CEA Act).

The applications were filed 9 March 2007. By letter of 18 April 2007, the Board announced that it would convene an oral public hearing beginning 13 August 2007. Hearing Order OH-3-2007 set out the procedures to be followed in the hearing. Parties wanting to intervene in the proceeding were given until 14 May 2007 to apply. The Board received 17 applications for intervenor status.

In its 18 April 2007 letter, the Board invited parties to suggest any amendments or additions to the List of Issues by 14 May 2007. The Board received comments from the Communications, Energy and Paperworkers Union of Canada (CEP) and the Dakota Nations of Manitoba on behalf of the Birdtail Sioux First Nation, Canupawakpa Dakota First Nation, Dakota Plains First Nation, Dakota Tipi First Nation and Sioux Valley Dakota Nation (Dakota Nations of Manitoba). The concerns raised by these parties related to value-added processing and the Dakota traditional territory, respectively.

By letter dated 23 May 2007, the Board advised that it would revise the List of Issues (found in Appendix I) to include the following: Impacts of the Project on Aboriginal People.

On 27 April 2007, the Board requested comments from the public on the draft scope of the environmental assessment of the Project. After considering the comments received from the Meewasin Valley Authority and Roseau River Anishinabe First Nation (Roseau River), the Board and the other Responsible Authorities (RAs) for the Project, Transport Canada and Indian and Northern Affairs Canada (INAC), determined the scope of the environmental assessment.

On 6 July 2007, the Manitoba Pipeline Landowners Association and Saskatchewan Association of Pipeline Landowners (MPLA/SAPL) filed a motion for orders to adjourn the Southern Lights hearing and consolidate the hearing with that of the Alberta Clipper Expansion Project (Alberta Clipper Project). As alternatives to consolidation, the MPLA/SAPL asked the Board to either reschedule the hearing at the same time in the same locations as the Alberta Clipper Project hearing, or, in order to enable interested landowners to attend the hearing, commence the hearing no earlier than 29 October 2007 to avoid harvest.

After considering the submissions of parties, the Board denied the request for adjournment and consolidation with the Alberta Clipper Project application. However, the Board scheduled hearings in Regina to accommodate the participation of Standing Buffalo Dakota First Nation (Standing Buffalo) and in Brandon to accommodate the participation of the MPLA/SAPL. Further information on this motion and others can be found in Appendix II.

By letter dated 19 October 2007, the MPLA/SAPL withdrew from the proceeding resulting in the cancellation of the Brandon hearing. The Board held the last phase of the hearing in Calgary commencing on 29 October 2007.

The public hearing was held on:

- 13, 14 August 2007 in Calgary, Alberta;
- 20, 21 August 2007 in Regina Saskatchewan; and
- 29, 31 October 2007 in Calgary, Alberta.

The Board used a life cycle approach in considering the Project. This means that all issues and concerns before the Board were considered in the context of the entire Project life cycle (i.e., design, planning, construction, operation, decommissioning and abandonment).

As an RA under the CEA Act, the Board completed an Environmental Screening Report pursuant to the CEA Act. The Report is provided as Appendix V to these Reasons. Further discussion of environmental matters can be found in Chapter 3 of these Reasons.

1.5 The Board's Public Interest Determination

Mandate of the Board

The NEB is an independent federal agency that regulates several aspects of Canada's energy industry. It was established in 1959 by Parliament by virtue of the proclamation of the NEB Act which transferred to the Board the responsibility for pipelines and certain matters related to oil, gas and electricity.[1] In addition, it granted the Board responsibility for regulating tolls and tariffs, and defined its jurisdiction and status as an independent court of record.

The NEB's purpose is to promote safety, environmental protection and economic efficiency in the Canadian public interest in its regulation of pipelines, international power lines and energy development, within the mandate set by Parliament. As part of its mandate, the Board, as a quasi-judicial tribunal, may hold public hearings in order to hear all sides and points of view prior to making decisions on applications for new facilities that fall within its jurisdiction. In carrying out its quasi-judicial duties, the Board is bound by its mandate under the NEB Act. In certain instances, such as this one, the Board also has responsibilities under the CEA Act.

With respect to the Southern Lights Project, part of the applicable legal framework is found in Parts III and IV of the NEB Act. Part III of the NEB Act requires the Board to make a determination with respect to the present and future public convenience and necessity in the Canadian public interest. Part IV of the NEB Act requires that the Board make certain determinations with respect to tolls and tariffs. In making its determinations, the Board must rely only on the facts that are established through the hearing process and must proceed in compliance with the principles of natural justice.

---

1 As defined in the division of powers between the provinces and the Federal government under sections 91 and 92 of the *Constitution Act, 1867*.

The Public Interest

The Board has described the public interest as:[2]

> The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that change as society's values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision.

Under the NEB Act, the factors to be considered and the criteria to be applied in coming to a decision on public interest or the present and future public convenience and necessity may vary with the circumstances, including the application, the location, the commodity involved, the various segments of the public affected by the decision, societal values at the time, and the purpose of the applicable section of the NEB Act.

In this proceeding, the Board heard evidence on engineering design and safety issues; economic considerations, such as supply and markets; public engagement and consultation; impacts on Aboriginal people; socio-economic and environmental effects of the Project; and land and routing matters.

The Board has determined that all of these factors are relevant in deciding whether the Southern Lights Project is in the public interest.

These Reasons also address issues arising from the applications pursuant to Part IV with respect to the tolls and tariff on the Line 13 Reversal, LSr Pipeline and Line 2. The Board's determination on whether the proposed tolling principles and tolling methodologies are just and reasonable is contained in sections 4.2.4 (along with the Board's decision on the requested method of regulation for the Line 13 Reversal) and 5.5.

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2 See the Board's Internet site at http://www.neb-one.gc.ca/PublicInterestFootnote_e.htm

Chapter 2

Standing Buffalo Dakota First Nation Motion

On 3 May 2007, Standing Buffalo filed an application for intervenor status in the Enbridge Southern Lights OH-3-2007 Hearing, in which it cited unextinguished Aboriginal title, self-governance rights and historic allyship status as the basis for its participation in the process.

As a preliminary matter at the oral hearing, counsel for Standing Buffalo raised two issues before the Board. The Board subsequently requested that these preliminary matters be filed by way of a Notice of Motion pursuant to section 35 of the *National Energy Board Rules of Practice and Procedure, 1995*.

The Notice of Motion was subsequently filed and requested the following decisions of the Board:

(a) a decision that the Board has no jurisdiction to consider the Southern Lights Application on its merits without first determining whether Standing Buffalo has a credible claim within the meaning of the Supreme Court's decision in *Haida Nation v. British Columbia (Minister of Forests)*, [2004] 3 S.C.R.511, S.C.J. No. 70 ('*Haida*'); and

(b) a decision that the duty of fairness requires that the Crown be required to attend and respond to Standing Buffalo's claim, and that, in the absence of any such response from the Crown, Standing Buffalo's claim should be accepted as uncontradicted and the Board should then determine that it is without jurisdiction to determine the substantive merits of the Southern Lights applications.

In support of the motion, Standing Buffalo provided evidence by way of affidavit and witness testimony during the Southern Lights hearing.

Upon receipt of the Notice of Motion, the Board established a process to allow other parties an opportunity to answer the motion and to allow for a reply from Standing Buffalo. This process was subsequently amended to allow for further reply following the argument portion of the hearing. The Board reserved its decision on the motion.

2.1 Submissions on the Motion

Standing Buffalo

Standing Buffalo asserts a claim of Aboriginal title over land where the Project is proposed to be located. Standing Buffalo submitted that it has a credible potential claim and thus the test set out in *Haida* is engaged. Standing Buffalo submitted that the NEB can only consider the substance of the Southern Lights applications once it has: (1) established that Standing Buffalo has made a credible potential claim to the land subject to the Project; (2) determined the scope of the Crown's duty to consult; and (3) satisfied itself that the Crown's duty to consult has been fulfilled.

Standing Buffalo asserted that its Aboriginal right to the land has existed since time immemorial and noted that Standing Buffalo has not entered into a treaty. According to Standing Buffalo, this combined with the relationship with the Crown premised on allyship, gives rise to a credible claim to governance rights.

Standing Buffalo argued that the fact that the Crown engaged in negotiations over the course of many years suggests that the Crown believes the claim is in fact credible. Standing Buffalo further submitted that, even though the Crown's response to it may have been negative, because the Crown has not appeared to contradict Standing Buffalo's position in this proceeding, one may conclude that the Crown does not take issue with the "existence" of Standing Buffalo's credible potential claim. Standing Buffalo took the position that the duty of fairness requires the Crown to respond to its claim and, if that does not occur, the NEB ought to find that it does not have jurisdiction to consider Southern Lights applications.

In the view of Standing Buffalo, the fact that the Project is proposed to be built on Dakota lands is a potential adverse effect as contemplated in *Haida* because it interferes with constitutionally protected governance rights. According to Standing Buffalo, the proposed pipeline would directly affect its right to control its traditional territory as a result of its assertion of Aboriginal title.

Standing Buffalo submits that the Board must first conclude that the Crown owes a duty to consult before assessing the adequacy of consultation. The strength of the claim and significance of the adverse effect should only be considered at the next step, determining the scope of the duty to consult and whether the Crown's consultation has met that standard. Standing Buffalo maintained that the Crown did not inform Standing Buffalo of the Project.

Standing Buffalo also argued that the public hearing process cannot satisfy the Crown's duty to consult because the NEB is not an agent of the Crown and that, unlike the Crown, the NEB does not owe a fiduciary duty to Standing Buffalo. It further argued that the Applicants' consultation cannot satisfy the Crown's duty because, although its consultation may satisfy the Crown's duty under certain circumstances, the Applicants are not capable of conducting meaningful consultation in relation to governance. Standing Buffalo claimed that the Applicants' consultation was perfunctory and not sufficient in the non-treaty context.

In summary, Standing Buffalo submitted that the Board must either order Canada to be present so that all parties may address the issue of jurisdiction with Canada present, or it must determine it has no jurisdiction to consider the merits of the substantive application before it.

Enbridge Southern Lights LP and Enbridge Pipelines Inc.

ESL and EPI submitted that the motion should be dismissed as there is no basis for the Board to decide as requested by Standing Buffalo. They submitted that, while the Board may issue a subpoena, a subpoena cannot simply be directed to the Crown. Further, ESL and EPI argued that no useful purpose would be served by doing so as it was already clear from the evidence that the Government of Canada does not accept the claims of Standing Buffalo. According to ESL and EPI, additional evidence of such claims would have limited probative value as it is not within the mandate of the Board to adjudicate on such matters.

EPI and ESL argued that the duty of Crown consultation does not arise just from the demonstration of a credible claim. There must also be a demonstration that the activity being proposed might adversely affect the claimed aboriginal rights.

ESL and EPI submitted that there is no reason or justification for the Board to either order the Crown to be present at the hearing or to make a preliminary determination about its jurisdiction to consider the merits of the Southern Lights applications.

Canadian Association of Petroleum Producers (CAPP)

CAPP opposed the motion and argued that the consequence of Standing Buffalo's position is unreasonable and that it is not supported by law. Further, CAPP submitted that the fundamental issue of concern to Standing Buffalo is beyond the jurisdiction of the NEB.

CAPP further argued that regulatory consideration of a development proposal does not require, as a precondition to the exercise of jurisdiction, the settlement of any claim. CAPP claimed that the fundamental issue for Standing Buffalo is to have the Crown respond favourably to its asserted rights and that its intervention in the NEB process is collateral to this fundamental issue. CAPP submitted that the Board cannot resolve that fundamental issue. Moreover, CAPP argued that the NEB does not have jurisdiction to refuse to process applications that meet regulatory requirements because of unresolved claims against the Crown and; furthermore, the case law does not require the Board to halt its process.

In response to Standing Buffalo's assertion that the NEB must accept Standing Buffalo evidence if it is uncontradicted, CAPP argued that there is no such rule of law applicable to NEB proceedings. Further, CAPP submitted that despite Standing Buffalo's assertion that the Crown has been silent, the evidence of Standing Buffalo shows that that has not been the case. In support, CAPP pointed to the evidence that Standing Buffalo had received a letter from the Government that was not favourable to the Standing Buffalo position, that it had met with the Honourable Bill McKnight and that the Canadian Environmental Assessment Agency (CEA Agency) had been in communication with Standing Buffalo.

CAPP submitted that unresolved claims do not present an absolute bar to ongoing activities or further development. According to CAPP, consultation is a process that leads to a balancing of interests and decisions can be made though there may be disagreement about the adequacy of the Crown's response. Finally, CAPP argued that unreasonable attempts to thwart decision-making are not permissible.

Reply Submissions of Standing Buffalo

In reply, Standing Buffalo clarified that it is not its position that any credible potential claim will automatically halt any development whatsoever. Standing Buffalo stated that a credible potential claim must be analyzed in accordance with the test in *Haida* based on a preliminary assessment of the strength of the credible potential claim and of the negative effect on the credible potential claim of the development being promoted. Standing Buffalo argued that the Board must conduct this analysis first in order to determine whether or not it has jurisdiction to proceed with the substantive merits of the application because, in some cases, the Crown's duty to consult and accommodate extends to the point of requiring the consent of the Aboriginal peoples affected.

According to Standing Buffalo, a review of the claim is required in order to determine if it is a credible potential claim and then it can be decided if consent is required.

In response to CAPP's argument that Standing Buffalo's claim should be rejected on the basis that, to accept it, would halt development, Standing Buffalo submitted that this is not the correct test to be applied.

It was also Standing Buffalo's position that the Board cannot properly assess either the strength of the claim or the negative effects of the Project on the claim without Canada being present to respond to the claim. Therefore, Standing Buffalo maintained that the Board should invite Canada to attend and respond to Standing Buffalo so that the Board would be in a position to conduct a preliminary assessment and to determine whether or not consent is required.

In response to the suggestion of EPI and ESL that the Board has no jurisdiction to join the Crown in these proceedings, Standing Buffalo argued that this ignores the fact that the honour of the Crown is engaged and that it is therefore not necessary for the Board to subpoena the appropriate representatives of the Crown to respond to Standing Buffalo's claim.

Standing Buffalo reiterated its objection to CAPP's reference to without prejudice communications that suggest that the Crown has rejected Standing Buffalo's claim.

According to Standing Buffalo, the content of these communications is not in evidence before the Board and so any conclusions that the respondents may have drawn about the content is speculative at best. Standing Buffalo argued that whether or not the Crown accepts or rejects a claim made by Aboriginal peoples does not determine that the claim is or is not credible. That assessment must be made objectively, in this case initially by the Board subject to review by the courts. Further, Standing Buffalo submits that preliminary assessment of their claim cannot be made without the Crown's response to it because although the Crown's opinion is not determinative, it will assist the Board by providing a complete picture of the circumstances of Standing Buffalo's claim.

2.2 The Board's Ruling on the Motion

The foundation for Standing Buffalo's motion is that the Project falls within the territory over which it asserts Aboriginal rights and title. Standing Buffalo claims Aboriginal rights and title over a vast territory that spans three Prairie provinces and a substantial portion of the northern United States. Though there have been negotiations between Standing Buffalo and the Government of Canada for several years, according to Standing Buffalo, its issues have not been resolved.

The Board's understanding of Standing Buffalo's position is that, since it has a credible potential claim, prior to considering the substantive merits of the Application, the Board must address the jurisdictional question of whether the Crown's duty to consult with Standing Buffalo has been fulfilled in accordance with the test in *Haida*. Standing Buffalo maintained that this analysis requires a determination of the scope of the duty to consult, which involves an evaluation of the strength of the Standing Buffalo claim and the adverse impacts or effects on that claim. Standing

Buffalo further maintained that for the Board to fully consider and answer the questions raised by Standing Buffalo, the Crown must be present to respond.

The Board does not agree with Standing Buffalo's position that, before it considers the substantive merits of the Certificate application, it must determine the strength of Standing Buffalo's claim and assess the adequacy of Crown consultation. The Board's process is designed to ensure that it has a full understanding of the concerns that Aboriginal people have in relation to a project before it renders its decision. Aboriginal people who have an interest in a project are able to participate in the regulatory process on several levels. The Board weighs and analyzes the nature of the Aboriginal concerns and the impacts a proposed project might have on those interests as part of its overall assessment of whether or not the project is in the public interest. The Board notes that most projects, including the Southern Lights Project, require various permits and authorizations from other federal or provincial government departments. For the reasons discussed below, the Board is not in a position to assess whether the legal obligations of those departments and agencies, including the adequacy of their consultations, have been fulfilled in relation to those permits and authorizations. The Board is of the view that the process it followed in the evaluation of the Southern Lights Project ensures that the decisions of the Board in respect of the Project will be made in accordance with all legal imperatives.

To understand why the Board has adopted these views, it is relevant to examine the Board's jurisdiction and process in some detail.

2.2.1 Board Jurisdiction and Process

The NEB was established by Parliament through the NEB Act to carry out a number of functions pertaining to energy and energy infrastructure in Canada. Among those functions is the assessment of applications for the construction and operation of pipelines and related facilities for the purpose of granting or denying orders, or issuing certificates subject to Governor in Council approval. The Board does not have the jurisdiction to settle Aboriginal land claims.

The Board weighs the overall public good a project may create against its potential negative aspects, including any negative impacts on Aboriginal interests, and makes its decisions in accordance with the public interest. As part of the decision-making process, it takes into consideration the potential environmental and social impacts and the potential for mitigation of those impacts. Mitigation measures proposed by an applicant or interested parties may be as varied as, for example, implementing a heritage resources contingency plan, re-routing a pipeline or adjusting the proposed construction schedule. The Board's mandate allows it to respond to potential impacts of a project on Aboriginal interests in a variety of ways, including accepting the impact in light of the benefits associated with the project, imposing conditions on the approval of the application to minimize the impact or denying the Application.

Since the NEB is an impartial, quasi-judicial tribunal bound by the principles of natural justice, it must receive information about Aboriginal concerns with respect to a specific project through its public hearing process. It is the practice of the Board to take Aboriginal interests and concerns into consideration before it makes any decision that could have an impact on those interests. In order to ensure that the Board has the best possible evidence before it in this respect, the Board's *Filing Manual* sets out the requisite elements of an application, requires applicants to consult

with potentially impacted Aboriginal groups early on in their project planning, and requires that applications include detailed information on any issues or concerns raised by Aboriginal groups or otherwise identified by the Applicant. In addition to the initial filings required by the *Filing Manual*, the Board frequently requests additional information from applicants about potential impacts of a project on Aboriginal people and mitigation options. Typically, the stronger the Aboriginal interests and more significant the potential impact, the more evidence the Board will require before rendering its decision. Such evidence could include the details on the nature of the Aboriginal rights and interests, the efforts made by an applicant to resolve issues and the possibility of mitigation of the impacts.

In accordance with the *Filing Manual*, the Applicants in this proceeding filed the company's Aboriginal consultation protocol; provided a description of potentially affected Aboriginal groups to be consulted; identified the potential information needs of those groups; outlined the methods of and timing of its consultation; and discussed the procedure for responding to issues and concerns, plans for future consultation and follow-up throughout operations. The Applicants also described any known heritage resources in the study area and discussed the potential for any undiscovered heritage resources in the study area. The Applicants included a Heritage Resources Discovery Contingency Plan in the Application, which described what contingency plans and field measures would be undertaken should a heritage resource (including archaeological, paleontological or traditional use sites) be discovered during construction. The Applicant also provided specific information regarding impacts on vegetation, fish and fish habitat, and wildlife and wildlife habitat, which the Board recognizes can directly or indirectly impact Aboriginal interests. The Applicant's pre-application consultations with various First Nations as well as the Board's assessment of potential impacts on Aboriginal interests are described in Section 3.4 of these Reasons. In addition to the information initially filed by the Applicants, the Board asked for additional information from the Applicants as well as various Aboriginal groups who expressed interest in the matter.

Aboriginal people with an interest in a project are invited to participate in the hearing process to make the Board aware of their views and concerns. The Board has made significant efforts in the past several years to provide information to Aboriginal people so that they can understand how to become involved in the regulatory process. In addition to the information provided to the Board via the Applicant, there are numerous ways for Aboriginal people to make their views known directly to the Board. This can include a letter of comment, oral statements, written evidence, oral testimony by elders, cross-examination of the Applicant and other parties, and final argument. The Board is obligated to carry out its functions in accordance with the rules of natural justice and procedural fairness. To the extent possible and within the parameters of procedural fairness, the Board has adopted a fair and flexible process that allows Aboriginal people to provide their views and evidence to the Board.

As more fully described in section 3.4 of these Reasons, Standing Buffalo participated fully in the OH-3-2007 proceedings and offered extensive evidence of their world view and concerns about the Project. The Board is of the view that in respect of this application, Standing Buffalo was fully informed about the Project through discussions with the Applicant, the Applicants' filings and participation in the hearing and had full opportunity to voice its views and concerns to the Board in respect of the Project.

The Board's process is designed to ensure it has the best information available about Aboriginal concerns so that it may take these concerns into consideration before it renders a decision. To reiterate, the Board requires applicants to take all reasonable steps to identify and contact Aboriginal people in the area of the proposed project prior to filing their applications. This ensures that potentially affected Aboriginal people have essential information about the project and can discuss their concerns and issues with the applicant in the early planning stages of the project. Through these early discussions, an applicant can often fully or partially address the concerns of the Aboriginal people or modify the project in response to such concerns. The applicant is required to file with its application evidence related to its discussions with potentially affected Aboriginal people as well as details of the issues or concerns raised, discussed and, where applicable, resolved. The Board will typically require further information and updates from the applicant. Aboriginal people with unresolved concerns are encouraged to make their views known to the Board through some form of participation in the hearing. The Board takes all of the evidence about Aboriginal rights and interests into consideration as part of its assessment of the project impacts and determination of whether the project is in the public interest.

2.2.2 Project-Related Authorizations and Permits from other Authorities

The NEB has a primary role in energy pipeline regulation and it is the principal body through which parties opposed to or in favour of a project make their views known. There is no other government department or agency that has the ability to impose conditions on a Certificate of Public Convenience and Necessity. Other government authorities may have their own regulatory responsibilities pertaining to specific aspects of a federal pipeline. These can include federal departments such as Fisheries and Oceans or Transport Canada, as well as provincial government agencies. The process for these approvals and permits may be carried out parallel to, or independently of the NEB process and are often not relevant to the NEB decision-making process. The Board cannot be directed by other government authorities, nor does the Board have authority to direct the activities of other government authorities. Further, their decision-making responsibilities generally need not be fulfilled before the NEB makes its decision in any particular case. Those government authorities may have their own specific requirements for the issuance of their authorizations and may carry out Aboriginal consultation in respect of their decisions, where appropriate. It is the responsibility of those government authorities to ensure that they have met their legal obligations and it is a matter for the courts, not the Board, if someone wishes to challenge their process.

2.3 Conclusion

In light of the above, the Board is of the view that it has the jurisdiction to make a final determination on the applications before it and will not require the attendance of a Crown official to discuss Standing Buffalo's claim. Not only were the Applicants required to provide information to the Board regarding potential impacts of the proposed Project on Aboriginal interests including those of Standing Buffalo, Standing Buffalo participated fully in the Board's process and had the opportunity to bring all of its concerns with the Project to the Board's attention. The Board is satisfied that it has the evidence that it needs to determine Project impacts on various interests, including those of Standing Buffalo, and to determine whether the Project is in the public interest.

Accordingly, the motion is denied.

Chapter 3

Matters Common to Diluent Pipeline & Capacity Replacement Projects

3.1 Economic Feasibility, Supply and Markets

In making its determination on the justification for and economic feasibility of a proposed pipeline project, the Board assesses whether the facilities are needed and would be used at a reasonable level over their expected economic life. In order to make this determination, the Board considers the evidence submitted on the supply of commodities that will be available to be shipped on the pipeline, the availability of adequate markets to receive products delivered by the pipeline and the adequacy of existing pipeline capacity. As well, the Board considers evidence related to financing the construction and ongoing operations of the proposed pipeline.

3.1.1 Project Costs

The combined capital cost of the projects is expected to be Cdn$384 million as shown in Table 3-1.

Table 3-1
Total Direct Capital Impact of the Collective Projects[1]

	New Capital Expenditures					Line 13 Transfer
	Land	Pipeline	Pipeline Construction	Facilities	Total	
Capacity Replacement						-93.5
LSr Pipeline	$12.0	$55.0	$174.0	$56.0	298.0	
Line 2 Modifications				$42.0	42.0	
Line 13 Reversal				$44.0	44.0	+93.5
Totals	$12.0	$55.0	$174.0	142.0	384.0	0.0

1 Capital costs are summarized in Application Section 2.9 Project Costs (p.2-5), Section 4.7 (p. 4-4) and Section 5.3 (p. 5-2). Section 3.3 (p. 3-2) contains the net book value for the Transfer. These costs are estimated for the year they will be incurred and include estimated inflation. The figures are in millions of Canadian dollars

3.1.2 Ability to Finance

The Project will be financed with non-recourse third party debt and equity funding ultimately being provided by Enbridge Inc. The Applicants stated that Enbridge Inc. will source the equity funding requirements for the Project from internally generated cash flow and capital market transactions. During the initial phase of the Project, Enbridge Inc. will provide a guarantee to third party lenders in order to secure a stand-alone interim credit facility for ESL to provide debt funding until the Project has received the necessary regulatory approvals to proceed with major

construction. At that time, all borrowing on the interim credit facility would be repaid by the non-recourse third party project financing credit facility and the associated guarantee from Enbridge Inc. on the interim facility would be cancelled. ESL borrowings would provide the source of debt financing for the Diluent Pipeline Project.

EPI will access third party debt raised by ESL and equity from Enbridge Inc. such that the Capacity Replacement Project would have a debt/equity ratio of 70/30 during construction and during the Interim Period. As of the closing date of the transfer of Line 13, the proceeds from the Line 13 Transfer will be offset against the then net book value of the Capacity Replacement Project, thereby completely mitigating any impact of the Capacity Replacement Project on the Canadian Mainline rate base. As well, the proceeds from the Line 13 Transfer would be used to repay all debt and equity funds raised to fund the Capacity Replacement Project, thereby completely mitigating any impact of the Capacity Replacement Project on the Canadian Mainline capital structure.

With respect to Line 13, the Applicants further advised that the revenue requirement for the first 15 years would be backed by the initial group of committed shippers. The Transportation Service Agreement (TSA) requires the shipper to maintain credit rankings at or above the following minimum credit ratings as identified in Moody's Investor Service (Baa3), Standard and Poor's (BBB-) and Dominion Bond Rating Service (BBB low). If a shipper's credit ratings were to fall below an acceptable level, additional assurances and guarantees would be required.

3.1.3 Diluent Pipeline Project

The Diluent Pipeline Project would transport diluent from Chicago, Illinois to Edmonton on Line 13, an existing EPI Mainline pipeline. Line 13 would be removed from southbound crude oil service and reversed to transport diluent from Clearbrook, Minnesota to Edmonton. Line 13 would have an annual capacity of 28 600 m^3/d (180 000 bbl/d) and would provide oil sands producers with access to an abundant, low-cost diluent supply. According to the Applicants, diluent is needed to blend with heavy oil and bitumen to enable those products to be transported by pipeline.

The Applicants were of the view that the Project is an innovative solution to meeting the need for incremental diluent supply because it involved both the use of existing facilities and the construction of new facilities. As a result, according to the Applicants, not only would the Project provide cost-effective diluent transportation by virtue of the use of an existing pipeline, it would provide benefits on the crude oil transportation side.

3.1.3.1 Diluent Supply

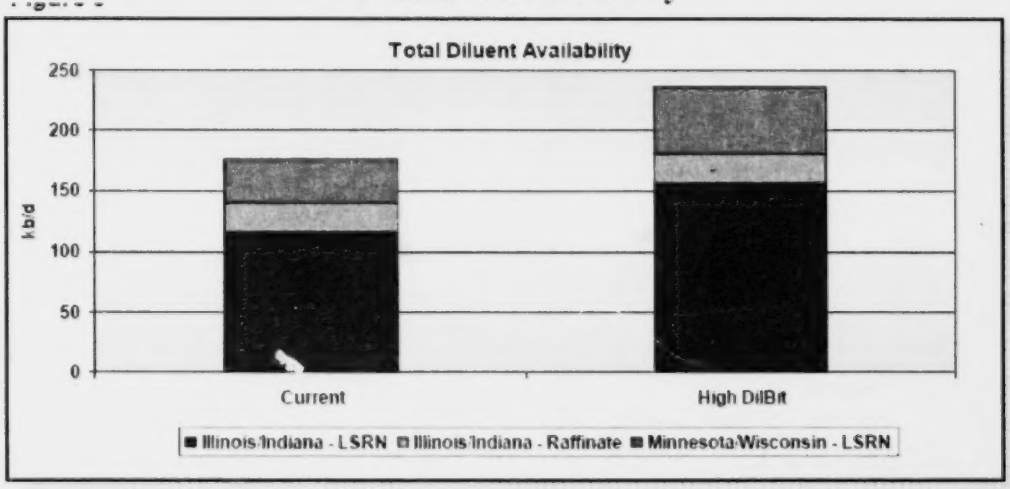
The Applicants maintained that the available diluent supply in the Chicago market is sufficient and competitively priced to be utilized in the oil sands projects. Muse Stancil was retained by the Applicants to provide an assessment of the diluent supply that could be available to the Project. It concluded that the diluent supply sources could fall into three broad categories: light hydrocarbon streams recycled from refineries; natural gasoline produced at Natural gas liquids (NGL) fractionators; and imports to North America of natural gasoline. Muse Stancil indicated

that the recycled streams from refineries are expected to comprise the major source of supply to the Project.

Muse Stancil developed two scenarios for estimating the price of diluent and supply availability. In its current crude scenario, Muse Stancil indicated that the total recycled refinery supply in the Midwest would be almost 28 500 m^3/d (180 000 bbl/d). Of the total potential supply volume from Midwestern refiners of about 28 500 m^3/d (180 000 bbl/d), essentially all of this volume is blended into gasoline. In its high dilbit scenario, Muse Stancil forecasts that dilbit runs could double to 127 000 m^3/d (800 000 bbl/d) and that the potential recycled refinery diluent volume would increase to 37 300 m^3/d (235 000 bbl/d). Under this scenario, the supply of Light Straight Run Naphtha is estimated to exceed the Midwestern refiners' technical capability to blend into gasoline, by an estimated 10 300 m^3/d (65 000 bbl/d).

The Applicants were of the view that the Project does not remove hydrocarbons from the North America market, as substantially all of the volume shipped to Alberta via Southern Lights is returned to the marketplace as a component in a Canadian dilbit grade of crude. Therefore, according to the Applicants, the Project does not impose a new, incremental demand for diluent-type hydrocarbons on the North American market. In summary, the Applicants maintained that the Project is not expected to have a dramatic effect on the supply demand dynamics in North America, primarily because it does not constitute an incremental demand on the total light hydrocarbon supply in North America.

Figure 3-1
Total Diluent Availability



3.1.3.2 Diluent Market

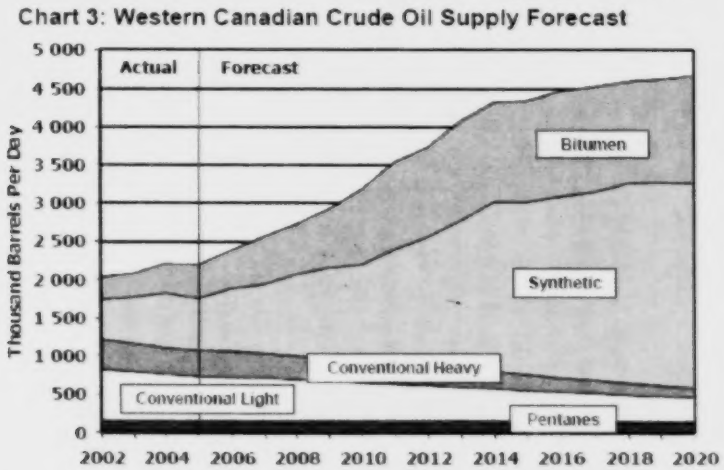
The Applicants' assessment of the diluent market took into consideration industry crude oil and local condensate production forecasts, anticipated volumes of heavy crude and raw bitumen production requiring dilution, and industry drivers for access to a new diluent supply. The Applicants also filed CAPP's *2006 Canadian Crude Oil Production and Supply Forecast.*

The Applicants identified some key points from the CAPP study including:

- EPI's forecast is similar to NEB and CAPP forecasts in identifying more than 312 000 m^3/d (1 963 000 bbl/d) of increased oil sands raw production over the next 10 years.
- Absent a pipeline importing condensate, raw bitumen supply in the synthetic bitumen (synbit) stream, net of forecast production for upgrading, grows from the 2006 estimate of 9 100 m^3/d (57 000 bbl/d) to 83 000 m^3/d (522 000 bbl/d) by 2010, increasing to 117 300 m^3/d (738 000 bbl/d) by 2015.
- CAPP forecasts declining supplies of natural gas condensates.
- Railed diluent imports into the Western Canadian Sedimentary Basin (WCSB) are increasing according to Statistics Canada.
- Imported diluent demand could range up to 35 600 m^3/d (224 000 bbl/d) by 2010 and up to 50 300 m^3/d (316 000 bbl/d) by 2015.

The Applicants were of the view that, given the above positive indicators of the potential diluent market, confirmed by firm long-term shipping commitments on the pipeline, and industry support as evidenced by the CAPP support letter, there is a strong market demand for import diluent by pipeline into the WCSB diluent market.

Figure 3-2
Western Canadian Crude Oil Supply Forecast



During the proceedings, the Applicants noted that the Line 13 Reversal does not include blending facilities as part of the Project scope. Furthermore, the Applicants stated that the blending facilities in Hardisty, Alberta and Kerrobert, Saskatchewan, where the diluent will be delivered, will be provided by connecting third parties. Although the Applicants had no further information concerning the capacity of the blending facilities in these locations, they indicated that the capacity would be largely dependant upon the amount of deliveries off the line.

3.1.4 Capacity Replacement Project

To replace the loss of southbound capacity on the EPI Mainline system resulting from the transfer of Line 13 to diluent service, the Project includes a Capacity Replacement Project that comprises the LSr Pipeline and Line 2 Modifications. The LSr Pipeline would include 288 km of new 508 mm OD (NPS 20) pipeline from Cromer to the Canada/US border near Gretna. It would have an annual capacity of 29 500 m^3/d (186 000 bbl/d). EPI indicated that there would be a loss of 11 000 m^3/d (69 300 bbl/d) of nameplate capacity out of Edmonton as a result of the Project. However, this capacity is currently not available due to system bottlenecks at Cromer. Construction of the LSr Pipeline and Line 2 Modifications would relieve the bottleneck and result in an effective increase in capacity from Edmonton to Cromer of 8 000 m^3/d (50 400 bbl/d) (70 300 m^3/d less 62 300 m^3/d).

The Line 2 Modifications and the LSr Pipeline are expected to be completed by the end of 2008. Line 13 is expected to be in diluent service in mid-2010. This would result in a period of time post-2008 where southbound crude oil capacity would increase by almost 34 800 m^3/d (220 000 bbl/d) until such time as Line 13 is taken out of southbound service. This, the Applicants argued, is another significant benefit of the Southern Lights Project as it provides additional Mainline capacity at a time when apportionment could become an issue. According to the Applicants, shippers of eastbound crude oil ex-Edmonton would realize a suite of benefits from the construction of the LSr Pipeline, including:

- a net effective increase in long-haul capacity out of Edmonton due to the elimination of Cromer injections;
- improved quality due to segregation of Cromer light sour crude volumes from Line 2 into the LSr Pipeline, and elimination of Line 2 breakout at Cromer; and
- decreased transit time due to higher flow rates and elimination of Cromer breakout.

According to the Applicants, these benefits would be realized with no cost to shippers out of Edmonton for the LSr Pipeline and Line 2 Modifications construction.

3.1.4.1 Crude Oil Supply

In support of its Application, EPI provided two forecasts for crude oil supply: CAPP's 2006 forecast and EPI's 2006 forecast. Both forecasts show significant increases in crude oil production, driven primarily by oil sands production growth over the next ten years.

With respect to Cromer receipts, EPI provided the volume and type of crude oil injected at that location. In 2007, as of April 2007, 31 000 m^3/d (195 300 bbl/d) and, in 2006, 29 100 m^3/d (183 300 bbl/d) of light sweet and sour crude oil and medium crude oil was injected at Cromer. EPI also provided a forecast of light and medium crude oil to 2015. It indicated that even with the natural decline assumed in the forecast, the 2015 LSr Pipeline annual utilization factor would remain above 85 percent. EPI maintained that, in the absence of the LSr Pipeline, crude oil received at Cromer could continue to be injected into the EPI Mainline system as is the current practice with the continuing negative impact of compromised long-haul capacity upstream of Cromer and increased potential for apportionment. According to EPI, the nearest alternative

pipeline system is the EPI North Dakota system; however, this system is forecast to remain full and, despite expansion plans, would not have the capacity for volumes normally received at Cromer. EPI submitted that trucking these volumes is not considered feasible.

Table 3-2
Forecast Crude Oil Receipts at Cromer

m^3/d	2008	2009	2010	2011	2012	2013	2014	2015
Light	20 200	20 700	20 200	20 600	20 400	19 800	19 100	18 500
Medium	10 000	10 100	9 700	8 800	8 500	8 000	8 000	7 900
Total	30 200	30 800	29 900	29 400	28 900	27 800	27 100	26 400

3.1.5 Aggregate Impacts of the Project on Domestic Interests

Concerns were expressed during the hearing that if the Project were approved there would be missed opportunities or negative consequences for domestic industries, employment and security of supply.

Views of Parties

CEP contended that the Project could pose a risk to Canadian economic development by undermining investment in Canadian industries as it would predominantly be used to facilitate the export of under-refined heavy oil. As such, it would limit supplies for Canadian requirements, hinder the stimulation of investment and job creation, and decrease the degree of energy security for all Canadians, which would result in a loss of economic development and job creation in Canada.

CEP also indicated that, to the extent that imports of diluent diminish the demand for synthetic crude oil to produce synbit, increasing the supply of diluent to oil sands producers may remove or weaken an important, albeit less than ideal, domestic market for upgraded bitumen, namely synbit production.

CEP contended that if the pipeline were not approved, oil companies that wish to refine Canadian bitumen would more likely make investment decisions to do so in Canada. CEP submitted a report by Informetrica Report, which had been prepared as evidence for the Keystone application hearing. This report estimated that, in the case of the Keystone Project, domestic processing could readily represent an additional 18 000 jobs per year to the Canadian economy when compared with a scenario in which only unrefined heavy crude oil is exported to the US markets.

CEP was of the view that it would have been better to allow other market decisions to be made before a project such as Southern Lights came forward. It maintained that the wholesale export of raw materials and natural resources from Canada was not in the public interest. In CEP's view, the public interest in Canada should embrace the notion of value-added processing of Canadian resources to obtain maximum benefit. It argued that the Diluent Pipeline Project component of the Southern Lights Project was a key to the export development model because it would provide the diluent needed to facilitate the large scale export of unprocessed oil sands

resources (bitumen). Furthermore, unlike other pipeline projects, the Diluent Pipeline Project had no other purpose but to prime a bitumen export looping system capable of moving 95 300 m^3/d (600 Mbbl/d) of bitumen blends to US markets.

CEP maintained that the underlying rationale for the Capacity Replacement Project was closely tied to the Diluent Pipeline Project as it sought to offset the reduction of southbound crude oil capacity on the EPI Mainline system resulting from the transfer of Line 13 to northbound diluent service. It submitted that, because it lacked an independent and clear rationale that accords with the Canadian public interest, approval of the Capacity Replacement Project should also be denied by the Board.

CEP requested that the Board deny the application either because it is contrary to the public interest, or the Applicants did not provide sufficient evidence to determine that the Project is in the public interest.

In response to CEP's position, the Applicants noted that the reversed Line 13 is not an export pipeline, rather, it would import diluent from the US to Western Canada. According to the Applicants, Line 13 would facilitate the transportation of dilbit to markets, including the US, but that transportation would occur largely through other pipelines that are independent of the Project. The Applicants pointed to the fact that the Board recently approved the Keystone Pipeline Project and found that it would not serve the Canadian public interest to deny a pipeline project for the purpose of restricting the export of bitumen so that it could be made available as feedstock for domestic upgrading projects. Such interference with the function of the market could be expected to negatively impact investment decisions and the availability of bitumen for both domestic and export users. The Applicants also argued that CEP's analysis of the potential impact of bitumen exports on domestic upgrading is wrong as CEP assumed that the amount of bitumen production would be fixed and that there would not be enough to go around. In this regard, the Applicants argued that the forecasts presented during the proceedings by CAPP and EPI are risked forecasts and assess how much domestic upgrading capacity would be developed over the forecast period. Accordingly, if more upgrading capacity is developed than forecast, bitumen production would be higher; therefore, according to the Applicants, the amount of bitumen production is not fixed.

The Applicants maintained that the Project would be an appropriate response to market forces and that Canadian energy policies are market based. It also noted that there is no government mandated upgrading or refining or continental energy market. According to the Applicants, economic efficiency comes from allowing markets to work.

The Applicants contended that there is no industry or government opposition to the Project, only opposition from labour organizations with concerns beyond the mandate of the Board.

CAPP maintained that, between the proposed in-service date of 31 December 2008 for the LSr Pipeline and the proposed completion date of 1 July 2010 for the Diluent Pipeline Project, shippers would actually receive an increase in available capacity. Furthermore, CAPP argued that this increased capacity would allow additional oil volumes to move to US markets, and producers strongly supported the addition of this capacity, especially in light of the recent apportionment experienced in the industry. CAPP strongly believed that trapped supply is not in

the Canadian public interest and that there was ample evidence of substantial growth in supply during the proceeding. In its submission, CAPP stated that there was a clear market need for the Southern Lights Project and the diluent supply to Canada. CAPP added that contractual support has been demonstrated for the Project. CAPP also stated that the market is working and that there is no need for protectionism and market restriction.

Views of the Board

The Board notes that no concerns were raised in regard to financing and no parties sought to examine the Applicants on either the proposed financing or the Applicants' ability to recover the capital, operating expenses or financing costs of the applied-for facilities. The Board accepts that the Applicants have the ability to finance the construction of the Project and place it into operation. The Board notes that despite commitments of just 43 percent of available capacity, shippers have accepted contractual arrangements that cover the entire revenue requirement for the Project for 15 years. The Board is therefore of the view that adequate provisions exist for recovery of capital, operating expenses and financing costs for the applied-for facilities.

The main justification for the Project is the need for increased diluent supply for the oil sands industry to enable growth in bitumen production. The Diluent Pipeline Project would serve that need by providing access to abundant and low-cost diluent to heavy oil and oil sands producers. The Board is of the view that the Applicants' assessment of diluent supply and markets, as well as the crude oil supply forecast which supports the need for increased diluent supply, are reasonable. The Board also believes that there is ample supply to ensure that the diluent pipeline is utilized. The Board is also satisfied that there will be crude oil supply to support the long-term operation of an import diluent pipeline. In addition, the Board is of the view that there is a need for additional crude oil pipeline capacity out of the WCSB to transport growing oil sands production. In this regard, post-2008 until mid-2010, prior to the in-service date of the diluent pipeline, southbound crude oil capacity would increase.

The Board notes that the Applicants did not include the diluent blending facilities and tankage within the scope of the Project. Furthermore, the Board is mindful that the diluent market is relatively new and that there is little data available on pricing and current volumes that are used in blending to enable pipeline transportation of bitumen. Nevertheless, the Board expects that this aspect of the industry will evolve in due course and result in improved market transparency. Further, the financial commitments made by shippers demonstrate that the reversed Line 13 is required and will be used and useful as evidenced by the TSAs between ESL and diluent shippers for committed volumes on the Line 13 reversal of 77 000 bbl/d (12 200 m^3/d). The committed shippers have agreed to pay, for a term of 15 years, tolls that will recover the pipeline's total cost

of service. In this regard, the Board finds that there is sufficient support for the Project.

The Board expects that the Project facilities will be useful to the functioning of the market. When assessing a facility application the Board usually considers the facility capacity relative to the apparent demand. With respect to the Diluent Pipeline Project, the Board is of the view that there is demand to increase diluent imports, albeit there is some uncertainty with respect to potential future volumes. In this case, the diluent transmission capacity is not sized to expected volumes as the Applicants proposed to reverse an existing line. Nevertheless, given the evidence on the market and supply, the Board is satisfied that the various components of the Project will be used at a reasonable level over its economic life.

The Board notes that the issue of end-of-life abandonment liability was raised during the hearing and concern was expressed with respect to the adequacy of financial reserves for these liabilities. In this regard, the Board notes that it has committed to address the issue of terminal negative salvage costs and future liability for abandonment through its recently instituted Land Matters Consultation Initiative (LMCI).[3] Like other generic proceedings that may result in industry-wide Board requirements, decisions arising from the LMCI process may impact the Project. In the interim, the Applicants must financially prepare themselves for the eventual end of the economic life of these facilities.

In regards to other domestic impacts, the Board is not persuaded crude supplies to existing Canadian refineries would be constrained as a result of the Project. Nor is it of the view that the Project will have a negative impact on job creation. The Board is of the view that there is adequate supply for existing refineries and increased movements to new markets. The Board would not be inclined to interfere in this market. In the Board's view, well-functioning markets bring about efficient outcomes that are in the public interest.

3.2 Environment and Socio-Economic Matters

The Board considers environmental and socio-economic matters under both the CEA Act and the NEB Act. The Board requires applicants to identify and consider the effects a project may have on biophysical and socio-economic elements, the mitigation to reduce those effects, the significance of any residual effects once the mitigation has been applied and enhancements of project benefits.

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3 See Board Letter 3 October 2007 outlining five issues areas to be addressed.

This chapter provides a brief description of the environmental assessment process used by the NEB for the Southern Lights Project. It also addresses some socio-economic issues that were not evaluated in the ESR.

3.2.1 Environmental Screening Process

The applications made pursuant to sections 52 and 58 of the NEB Act triggered the requirement for an environmental assessment under the CEA Act. Since the Project does not require more than 75 km of new right-of-way (RoW), a screening level of assessment was conducted.

The Applicants filed an Environment and Socio-Economic Assessment (ESA) for the Project and concluded that the Project would not have a significant adverse effect on any environmental or socio-economic resources provided the mitigation measures identified in the ESA are implemented during Project construction, operation, decommissioning and abandonment.

Pursuant to the CEA Act *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements*, the NEB coordinated RA and Federal Authority (FA) involvement in the CEA Act process. To reduce potential duplication, the Board and other RAs worked together to create an efficient screening process that would meet the needs of each in carrying out its environmental assessment responsibilities.

On 27 April 2007, the Board requested comments on the draft scope of the environmental assessment of the proposed Project from the public. After considering the comments received from the Meewasin Valley Authority and Roseau River, the Board and the other RAs for the proposed Project, Transport Canada (TC) and INAC, determined the scope of the environmental assessment on 6 June 2007.

On 13 December 2007, the Board issued a draft Environmental Screening Report (ESR) for public review and comment. The Board received comments from TC, INAC, DFO, Environment Canada, Health Canada, Manitoba Conservation, Manitoba Intergovernmental Affairs and Manitoba Water Stewardship. The Applicants subsequently filed their comments on 4 and 22 January 2008. These comments are reflected in the ESR in Appendix V of this document.

The ESR describes the Project and Project setting, identifies concerns raised by the public, specifies the methodology used by the Board in its analysis, outlines the potential environmental and socio-economic adverse effects and discusses the environmental protection and mitigation measures proposed by the Applicants. The ESR also includes recommendations for conditions to be included in any Board regulatory approvals and contains an evaluation of the likelihood of significance for any adverse effects.

3.2.2 Socio-Economic

Potential socio-economic effects covered by the CEA Act are included in the ESR. Other potential socio-economic effects covered by the NEB Act are addressed within three sections of this document: the Project's effects on employment and economics are discussed below; the Project's effects on other domestic interests are discussed in section 3.1.5; and socio-economic

matters specifically related to the Capacity Replacement Pipeline Project are discussed in section 5.4.

The direct and indirect benefits of the construction phase were estimated to be Cdn$332.3 million (in 2006 dollars). This is based on an estimated $259.4 million of direct expenditures on construction, with the vast majority of the capital outlay (95 percent or $247.5 million) expected to be spent in Canada. The Applicants also submitted that using the Statistics Canada input output tables, the economic effects are expected to be an increase of $133 million in gross domestic product and employment of 1 794 person years. As well, during the construction phase, a total of $33.9 million in taxes would accrue to federal, provincial and municipal governments.

Views of the Board

With respect to its regulatory decision under the NEB Act, the Board has considered the ESR and its recommendations. The Board has determined that, with the implementation of the Applicants' environmental protection procedures and mitigation measures and the Board's regulatory requirements, including recommended conditions, the Project is not likely to cause significant adverse environmental effects.

The ESR is appended to this document and is available in the Board library or on-line at the Board's Regulatory Documents at www.neb-one.gc.ca.

In terms of socio-economic impacts not considered in the ESR, the Board is of the view that the employment and economic effects described above would be benefits arising from the Project. As outlined above, other non-ESR socio-economic impacts are considered elsewhere in these Reasons.

3.3 Public Consultation

The Board requires regulated companies to undertake an appropriate level of public involvement commensurate with the setting, as well as the nature and magnitude of each project.

This section addresses the public consultation program that was undertaken for the Southern Lights Project. The Applicants' consultation with Aboriginal people is discussed in section 3.4 and its consultation with shippers is discussed in section 4.2.4.2.

The Applicants' Consultation Program

The Applicants stated that the consultation program for the Project was based on EPI's Corporate Social Responsibility (CSR) Policy, which includes principles such as engaging stakeholders early in the development and planning process, undertaking consultation in an open and transparent manner, and maintaining ongoing dialogue with stakeholders through all project stages.

Most aspects of the Southern Lights Project consultation program were carried out jointly with the consultation program for EPI's Alberta Clipper Project, which is also subject to NEB review (Hearing Order OH-4-2007). The proposed timeline and the location of the two projects are similar so a joint consultation program was expected to improve clarity and convenience for program participants. Information was provided to stakeholders about both projects by means of correspondence, communication materials and community open house meetings. Information about the projects was provided to approximately 2 500 landowners and tenants owning or residing on land directly affected, and adjacent to, the 1 070 km RoW. In addition, people owning or residing on lands within 200 metres of the proposed RoW were informed about the proposed projects.

The Project public consultation program was initiated in September 2006 and has, to date, included a variety of activities including direct meetings with landowners and tenants, meetings with First Nations, meetings with government officials, public notices, open houses, a toll-free project message line and a Project web site. In response to issues raised by stakeholders, EPI modified the LSr Pipeline route and engaged in negotiations with landowners associations to address outstanding concerns. The issue of routing modifications is discussed in more detail in the ESR accompanying these Reasons.

Consultation Throughout the Lifecycle of the Facilities

Intervenors filed evidence with respect to their past experience with EPI regarding existing pipelines on their properties. Concerns were expressed that consultation during the operations phase of these pipelines was insufficient and that EPI did not provide adequate notice prior to entering properties to undertake repair and maintenance digs.

The Applicants have stated that consultation will continue throughout the construction and operations phases as required by EPI's CSR Policy. During the operations phase, stakeholder communications with respect to the Project facilities will be integrated into the scope of the existing Public Awareness Program conducted by EPI along the RoW.

In addition, in the Settlement Agreement between EPI and MPLA/SAPL, which was filed in these proceedings, EPI and MPLA/SAPL agreed to the formation of a Joint Committee for the Southern Lights and Alberta Clipper Projects. The terms of reference for the Joint Committee indicated that it would provide a mechanism to address systemic concerns that arise during and following construction.

With respect to issues that may arise involving landowners who are not members of MPLA/SAPL, at the oral hearing, the Applicants indicated a preference to have the Joint Committee represent both members of MPLA/SAPL and non-members. However, discussions on this matter had not taken place with MPLA/SAPL at the time of the hearing. If MPLA/SAPL were not in agreement with this approach, then the Applicants indicated that a second committee would be formed to represent non-members.

Views of the Board

The Board notes that the Applicants undertook much of the consultation for the Southern Lights and Alberta Clipper Projects jointly. The Board finds that the Applicants properly identified potentially affected stakeholders and Project impacts and used appropriate methods to engage members of the public and provide them with Project information.

The Board acknowledges concerns raised by the public about the importance of consultation throughout the operations phase of the Project and, in particular, in advance of operations and maintenance activities. The Board expects the Applicants to comply with the Board publication, *Operations and Maintenance Activities on Pipelines Regulated Under the National Energy Board Act: Requirements and Guidance*. Pursuant to section 4.3 of this publication, the Board requires regulated companies to engage parties whose rights or interests may be affected prior to undertaking operations and maintenance activities. Companies are required to document all engagement activities and maintain documentation for audit purposes.

With respect to the Settlement Agreement between EPI and MPLA/SAPL in relation to the Southern Lights and Alberta Clipper Projects, the Board expects regulated companies to conduct consultation in the early stages of project planning so that stakeholders concerns can be identified and appropriate steps can be taken to address them. In this case, the Board commends EPI and MPLA/SAPL for their efforts to engage in meaningful consultation about Project-related issues and to reach an agreement on the best avenue for their resolution.

The Board notes that 2 500 landowners and tenants were consulted and the MPLA/SAPL together represent approximately 321 landowners. For landowners who are not members of MPLA/SAPL and may have concerns arising from the Project, the Board is satisfied that the Joint Committee established by way of the Settlement Agreement, or alternatively, a second committee, could provide a useful mechanism to address issues that may arise during or after construction.

In addition to any committees contemplated by the parties, the Board has proposed a condition, should the Project be approved, requiring the Applicants to post all of their commitments on their company web site and to update that list at least quarterly. Further, the Applicants would be required to maintain detailed records of landowner complaints. The Board is of the view that these measures would facilitate ongoing dialogue between parties whose rights and interests may be affected by the Project throughout its lifecycle.

In the Board's view, the Applicants have conducted a reasonable public consultation program. Their ongoing commitment to consultation combined with the proposed conditions would continue to fulfill the requirements for consultation on the Southern Lights Project. This Panel makes no comment or finding with respect to the adequacy of the consultation program for the Alberta Clipper Project.

3.4 Impacts of the Project on Aboriginal People

Aboriginal Engagement by the Applicants

The Applicants used a 160 km corridor centred on the planned RoW (i.e., 80 km on each side) to identify Aboriginal people for consultation purposes. Initial consultation took place with First Nations whose reserves were within the corridor and with Métis organizations representing Métis communities within that corridor. In Alberta, the Applicants originally identified Métis communities represented by the Métis Nation of Alberta Region 2 and 4 First Nations. In Saskatchewan, the Applicants originally identified Métis communities represented by the Métis Nation – Saskatchewan Western Regions IA, IIA and III and Eastern Region III, and 17 First Nations. In Manitoba, the Applicants originally identified Métis represented by the Manitoba Métis Federation and eight First Nations. In addition, if Aboriginal people outside of the 160 km corridor indicated that they wished to be consulted, the Applicants engaged in consultation with those communities as well.

The Applicants' Indigenous Peoples Policy lays out key principles for relations with First Nations and Métis people. These principles include respect for traditional ways and land, heritage sites, the environment and traditional knowledge. The policy is also designed to ensure a consistent and thorough approach to consultation and engagement activities.

In October 2006, the Applicants began their first round of Aboriginal engagement with the Aboriginal people they had originally identified. This included providing Project information, requesting any consultation protocols that the communities had and discussing any potential adverse affects that could be caused by the Project.

Prior to the filing of the Project applications, the Applicants' Aboriginal engagement activities continued through a second and third round which included exchanges of correspondence and telephone calls as well as meetings with Métis organizations and First Nations.

Representatives of EPI's Aboriginal Affairs group met with INAC in 2007 to discuss the role of INAC with respect to crown consultation. Dialogue also focused on a future meeting date, which would include the participation of regional offices in Alberta, Saskatchewan and Manitoba. Future meetings were to provide an opportunity for the Applicants and INAC to better understand crown consultation on a go-forward basis, along with discussions on issues and concerns of the corridor communities. The Applicants also engaged the Manitoba Regional Office of INAC because the Project would traverse the reserve lands of the Swan Lake First Nation.

The Applicants confirmed that the Standing Buffalo reserve was located within the identified 160 km consultation corridor but was inadvertently missed in their first rounds of consultation. Contact with that First Nation did not occur until February 2007. Since that time, the Applicants have met with representatives of the Standing Buffalo.

According to the Applicants, the invitation to meet with Aboriginal people remains extended and they would appreciate a continuation of discussions. In addition, the Applicants will continue to meet with the regional offices of INAC for purposes of providing Project updates.

The Applicants confirmed that its representatives met with Peepeekisis First Nation (Peepeekisis) in accordance with the invitation outlined in the Letter of Comment from that First Nation.

Aboriginal concerns identified during the consultation activities described above included the availability of employment, training, business and contracting opportunities; potential contamination of community water supplies due to spills; prevention of pipeline ruptures; routing of the pipeline to avoid crossing reserves and Treaty Land Entitlement lands; and unsettled land claims.

The Applicants acknowledged the potential impacts on heritage resources, previously unidentified buried heritage resources and paleontological resources.

Hearing Participation by Aboriginal People

Standing Buffalo and the Dakota Nations of Manitoba intervened in the proceeding and Letters of Comment were filed by Peepeekisis and Roseau River. Standing Buffalo was the only First Nation to participate in the oral portion of the hearing, as the Dakota Nations of Manitoba subsequently withdrew their intervention. Standing Buffalo participated in the process by filing written evidence on 3 July 2007, responding to an NEB information request on 24 July 2007, leading direct evidence and cross-examining witnesses at the oral hearing.

Views of Standing Buffalo

On 3 May 2007, Standing Buffalo filed an application for intervenor status in which it cited unextinguished Aboriginal title, self-governance rights and historic allyship status as the basis for its participation in the process.

In response to an information request from the Board asking for a detailed explanation of the impacts of the proposed Project on Standing Buffalo interests, Standing Buffalo stated that the Project cuts through traditional Dakota lands, lands that are sacred and for which the Dakota people have stewardship obligations. The response also contained the submission that any building project is an interference with the land that could disrupt wildlife, harm the land and soil or disturb traditional sites and Crown land that Standing Buffalo may claim pursuant to an agreement with the Crown to replace flooded reserve lands.

Standing Buffalo provided a map that showed the Project located within the asserted traditional territory of Standing Buffalo. Elder Goodwill stated that the traditional land of the Dakota People extended through the prairie provinces and down into several states in the United States.

According to the Elders, the Dakota People were nomadic, following the buffalo herds in their migrations and accessing various resources in various locations throughout the year.

The Elders testified that consideration of the Project has shown that there are two worldviews that need to be reconciled. One, the worldview of Standing Buffalo, is holistic in its perspective and the holders of that worldview take into consideration everything before making a decision. According to the Elders, this is required because they must consider the implications for the next seven generations. The Elders indicated that the other worldview is linear and compartmentalized.

The Elders testified that the Seven Council Fires, consisting of many bands of Dakota, Lakota and Nakota, govern their People and that through the Seven Council Fires, the Dakota People had an alliance with the British Crown that existed earlier than 1776.

In addition to his testimony Elder Goodwill provided information regarding the history of the Dakota/Lakota people in his affadavit. He stated that:

> Elders tell us that the Dakota/Lakota occupied lands north of the 49th parallel well before the coming of the "white man". Most express dismay that the Crown now takes the position that this is not true.

Chief Redman stated in his written evidence that Standing Buffalo has been involved in extensive meetings with the Government of Canada and the Office of the Treaty Commissioner regarding outstanding issues concerning unextinguished Aboriginal title and governance rights of the Dakota/Lakota. Chief Redman also stated that there have been 70 meetings and yet the Government of Canada has not acknowledged its lawful obligation and continues to discriminate against Standing Buffalo regarding its lawful obligations concerning Aboriginal title, sovereign rights and allyship status by failing to resolve these outstanding issues.

Despite sending a number of letters to the Government of Canada "regarding the discussions with the Government of Canada concerning the Board interventions and how they relate to outstanding Dakota/Lakota issues," Chief Redman stated that he has received no response.

Chief Redman alleges the consultation listed in the Applicants' evidence relates to the Alida to Cromer Capacity Expansion hearing and the Applicants and Canada have failed to consult Standing Buffalo in breach of lawful obligation to the First Nation. He stated that the route of the pipeline is through traditional territories of Standing Buffalo and suggested that the Project would further limit the Crown lands that would be available to meet the terms of its flood compensation agreement and any Treaty claim. Standing Buffalo also presented evidence of a general nature as to the existence of sacred sites along the existing and proposed RoW for the Project.

Chief Redman explained that consultation from Standing Buffalo's point of view had to be inclusive of the federal government, the company proponent and the First Nations with an interest in the land. Discussions between the First Nation and the company did not amount to consultation in his view. Chief Redman took issue with the characterization of discussions between representatives of the Applicants and Standing Buffalo representatives as consultation. He also took the position that communications between Standing Buffalo and the Applicants

after 13 April 2007 were made on a 'without prejudice basis' and should therefore not be raised before the Board.

When asked for advice as to how the Applicants could sit down and engage with Standing Buffalo about the Project and its impacts, Chief Redman stated:

> It would take the federal government to sit down, recognize the Dakotas that they have a lawful obligation to the Dakota people for starters and sit down and have a proper dialogue.

In response to an undertaking to the Applicants' counsel, Standing Buffalo filed a letter from the CEA Agency to Chief Redman, dated 29 June 2007 in which a representative of the CEA Agency asked whether representatives of Standing Buffalo wished to discuss the Project. The letter went on to briefly describe the Project and to advise of the NEB hearing. Chief Redman indicated that he had only received the letter about three weeks previous.

During the hearing, the Applicants and CAPP asked Standing Buffalo for further information regarding a letter received from Canada regarding its alleged claim. Chief Redman refused to respond to such questions on the basis that such correspondence was without prejudice correspondence.

Views of Peepeekisis

In a Letter of Comment dated 28 June 2007, Peepeekisis stated that the Applicants had not consulted with Peepeekisis citizens or its government. Furthermore, Peepeekisis alleged that, despite Enbridge's Corporate Social Responsibility policy which recognizes the value and importance of public consultation and stakeholder engagement, Peepeekisis was not involved in personal consultation meetings. The letter stated that methods such as project information mail-outs and public notices do not constitute consultation.

The Letter of Comment also stated that the proposed Project will run through a Treaty Four traditional and sacred burial ground, and exceed the maximum number of six inches that the Peepeekisis forefathers ceded and agreed upon in the signing of Treaty 4. Peepeekisis also noted that it did not at any time agree to the transfer of natural resources to the Province, as contained in the *Natural Resources Transfer Act* of 1930. Peepeekisis stated that there was no indication as to how First Nations peoples will directly benefit from the Project and alleged that, the Applicants and the Board in cooperation with the Provincial and Federal Governments, are in non-conformance with numerous United Nations conventions and agreements. Peepeekisis submitted that, if the Applicants' application is considered over the rights and existence of Indigenous Peoples, it is sending a message that the Board places capitalism as a priority over Aboriginal rights. The letter states that Peepeekisis people are indigenous to the land and to their environment and thus are afforded International Status and are protected under International Law.

On 28 July 2007, the Board sent a letter to Peepeekisis asking for clarification on how the proposed Project may specifically impact the Peepeekisis' interests and for any suggestions as to how those impacts might be mitigated. The Board's letter informed Peepeekisis that the Board was considering holding part of the hearing in Regina and that, even though the deadline for

registering to make an oral statement had passed, Peepeekisis could ask the Board for leave to make an oral statement.

In response to the Board's letter, Peepeekisis stated that the proposed Project will run through Treaty 4 lands and that those lands were Peepeekisis's traditional lands. The response also referenced the fact that the pipeline would exceed the depth of a plough as agreed upon in Treaty 4 and the fact that, in its view, necessary Crown consultation had not occurred with respect to this Project. While the letter stated that Peepeekisis's legal counsel would respond further on the First Nation's behalf, the Board did not receive any further correspondence from Peepeekisis on the record of the Southern Lights proceeding. Given that the letter suggested that there may be some confusion as to how to participate in the Board's process, the Board sent a letter clarifying its procedures to counsel for Peepeekisis.

Views of the Dakota Nations of Manitoba

On 14 May 2007, the Dakota Nations of Manitoba filed an application for intervenor status, which included the claim that the Project would cross and impact lands that are part of the traditional territories of the five Dakota Nations of Manitoba and that the Dakota Nations of Manitoba have unextinguished Aboriginal rights including Aboriginal title and governance rights in relation to those territories. Their application for intervenor status also indicated that, to date, the Government of Canada has not formally committed to the negotiations required to deal with matters arising from the unfulfilled lawful obligations of the Government of Canada to the Dakota Nations of Manitoba and that the Government has not undertaken the necessary consultations to discharge its legal and fiduciary duty to consult the Dakota Nations of Manitoba and to meet the legal requirements of consultation and accommodation in respect of the Southern Lights pipeline or other pipelines.

By letter dated 25 July 2007, the NEB was advised by Co-Chiefs Chalmers and Whitecloud that the Dakota Nations of Manitoba were withdrawing from continued intervention in the Southern Lights applications before the Board as a result of an initial agreement reached with the Applicants. They further advised that they appreciated the positive and professional manner in which the Applicants had approached the discussions with the Dakota Nations of Manitoba. The Dakota Nations of Manitoba were optimistic that a cooperative working relationship for the future as well as substantive agreements in the longer term that would benefit their membership as well as the Applicants' pipelines would be the final result. The Chiefs commended the Applicants for their open and positive approach to the issues that were brought forward by the Dakota Nations of Manitoba and stated that they were confident that this same approach would be maintained in future discussions.

The Dakota Nations of Manitoba reiterated the concerns with respect to the Government of Canada's obligation to settle the issues that arise from unextinguished title and other related Aboriginal rights and the obligation to consult and accommodate the Dakota Nations of Manitoba who may be impacted by the proposed pipeline facilities. The Dakota Nations of Manitoba advised that discussions with the Government of Canada continue, but have not yet resulted in a final commitment in relation to the negotiation based on unextinguished Aboriginal title and rights.

The letter further stated that views on whether any legal obligations that may exist have been discharged will only be assessable in light of the outcomes that will be secured from the discussions into which the parties were then entering.

The withdrawal from the Southern Lights hearing was made on a without prejudice basis and was not to be construed as a change to the legal positions of the Dakota Nations of Manitoba previously put forward.

Views of Roseau River

In a Letter of Comment dated 1 August 2007, Roseau River broadly outlined its concerns with the Project. These included a concern that the taking up of lands and resources within Roseau River Territory for Enbridge's pipelines materially affects Roseau River's ability to obtain satisfaction of its treaty land entitlement under Treaty One. Roseau River stated that a March 1996 agreement between the First Nation and the Government of Canada recognized Roseau River's entitlement to acquire up to 16 218 acres of land in its Territory to be set aside as reserve land. According to Roseau River, only a small portion of this amount had been identified and acquired as of the date of the letter. The Letter of Comment raised concern with respect to a lack of funding support to First Nations and stated that the Crown has an obligation to engage in "meaningful consultation with respect to [identified] issues, as well as other impacts on the Roseau River Anishinabe First Nation to be identified through a properly resourced review process."

On 28 July 2007, the Board sent a letter to Roseau River asking for clarification on how the proposed Project may specifically impact Roseau River's interests and any suggestions as to how those impacts might be mitigated. The Board's letter informed Roseau River that the Board was considering holding part of the hearing in Brandon, Manitoba and that, even though the deadline for registering to make an oral statement had passed, Roseau River could ask the Board for leave to make an oral statement.

In response, Roseau River advised the Board in its 1 August 2007 letter that it had a claim against Canada with respect to reserve cut-off lands that was before the Indian Reserves Commission and that the question of the title to lands and resources within Roseau River Territory remains unsettled. Roseau River submitted that, pursuant to the March 1996 agreement, it has an established legal right to ownership of lands still to be selected, while pursuant to the unsettled claims, Roseau River has a *prima facie* case to ownership of further and additional lands. According to Roseau River, the taking up of lands for Enbridge's pipelines materially affects these established and *prima facie* rights, by altering and encumbering the land base to which the First Nation maintains legal rights and claims.

Views of the Applicants

The Applicants met with Peepeekisis' Chief, council and Elders and asked about direct impacts and any related concerns. They were not advised of any specific impact of the Project. Moreover, the Applicants stated that since this meeting, they had not heard from the Peepeekisis about any other concerns or potential impacts.

Subsequent to that meeting, the Applicants have been meeting with the member Chiefs of the Treaty One First Nations organization, which includes representatives of Roseau River and other First Nations, on the Project. The Applicants were not aware of any lands under the treaty land entitlement process along their pipeline RoW that the First Nation would consider as part of their claim process. The Applicants were also not aware of any further impacts on Aboriginal interests beyond those identified in the application or subsequent filings.

The Applicants have committed to implementing the Heritage Resources Discovery Contingency Plan in the event that previously unidentified archaeological, historical or paleontological sites are discovered during construction. Should any of these resources be discovered during construction, the Applicants have committed to suspending construction activity until they are authorized by provincial authorities to resume. If site-specific concerns are raised by Aboriginal people during consultation, attempts to resolve those concerns will be guided by the Indigenous Peoples Policy. Archaeological and paleontological investigations will be carried out and the results would be filed with the Board.

The Applicants maintained that no current traditional use of the lands along the proposed LSr Pipeline has been identified. Further, the Applicants' witnesses testified that they did not believe the Project would have any impacts on Standing Buffalo and that the existing pipeline system has been in operation for many years.

Views of the Board

The Board requires its regulated companies to consult with potentially affected people early in the planning phase of a project. This practice is essential if matters of concern to those affected are to be addressed through the design of the project.

Once an application is filed with the Board, all interested Aboriginal people have the opportunity to participate in the Board's process to ensure their views are made known and can be factored into the Board's decision-making process

In this case, the Applicants identified Métis communities and First Nations whose reserves were located within a corridor of 160 km, centred on the planned RoW. Consultation with Aboriginal people began in October 2006 and has been ongoing since that time.

Although Standing Buffalo was not identified and contacted until February 2007, the Applicants have made efforts to consult with and have met representatives of Standing Buffalo on several occasions since February and continue to seek ways to discuss the Project with that First Nation.

The Board notes the Applicants' commitment to discuss with Standing Buffalo the potential for the Project to impact sacred sites, develop a work plan and incorporate mitigation measures to address specific impacts on

sacred sites into its Environmental Protection Plan. The Board would encourage Standing Buffalo to bring to the attention of the Applicants its concerns with respect to potential Project impacts on sacred sites. In light of the foregoing, the Board finds that the design of the Applicant's Aboriginal consultation program is adequate.

Standing Buffalo suggested that the Project would further limit its ability to satisfy the terms of its flood compensation agreement. Similarly, Roseau River suggested that the Project would further limit its ability to satisfy the terms of its Treaty land entitlement. The Board notes that the proposed Line 2 Modifications and Line 13 Reversal do not contemplate the acquisition of any further land as the proposed work will take place within the boundaries of existing EPI station sites. Further, the proposed LSr Pipeline involves the acquisition of only 2.17 ha of Crown land for permanent easement and would require a disposition from the appropriate authority. The remaining land required for the Project is privately held and primarily agricultural land.

The Applicants indicated that they met with the member Chiefs of the Treaty One First Nations organization, which includes Roseau River, and that, based on the information that has been provided by the First Nation, the Applicants were not aware of any lands under the treaty land entitlement process along the Southern Lights Project RoW that the First Nation would consider as part of their claims process. The Applicants committed to continue to work with the Treaty 1 First Nations organization.

The Board recognizes that the identification of traditional use sites will often require the cooperation of Aboriginal people and notes that the Applicants have committed to the implementation of a Heritage Resource Discovery Contingency Plan which includes specific procedures related to the discovery of archaeological, paleontological, historical or traditional land use sites, including the evaluation and implementation of appropriate mitigation measures. The Applicants have committed to ongoing consultation with Aboriginal people throughout the lifecycle of the Project. The Board is of the view that such consultation, which would include matters of sacred and archaeological sites, would be in the best interests of all parties. The Board is also of the view that such ongoing discussions between the Applicants and Aboriginal people, coupled with the Heritage Resource Discovery Contingency Plan would minimize potential impacts on traditional use sites, if encountered.

Recognizing the importance of archaeological resources to Aboriginal people, should a Certificate be issued for the LSr Pipeline, the Board would include a condition that directs the Applicants to immediately cease all work in the area of any archaeological discoveries and contact the

responsible provincial authorities. This would ensure the protection and proper handling of any archaeological discoveries.

In terms of capacity funding, the Board notes that the Applicants submitted that they recognize that First Nations and Metis communities may have specific financial and capacity requirements in responding to the information provided to them about the Project and indicate that, where there may be a potential effect on a First Nation or Metis group, the Applicants will offer funding to assist the community in assessing such potential effects and to develop a response. The Board finds that the Applicants correctly acknowledge that engagement will vary with the circumstances and with the potential effect of the Project on the Aboriginal group.

Subsequent to their submission of Peepeekisis's Letter of Comment, the Applicants met with the Peepeekisis on July 17, 2007. During the meeting, the specific question was asked of the First Nation representatives about the direct impacts and any related concerns about the Project. The Applicants submitted that their representatives were not advised of any direct impacts and any related concerns about the Project and that Peepeekisis had not advised of additional concerns or impacts since that meeting. The Applicants committed to working with Aboriginal people throughout the Project. The Board notes that Peepeekisis did not expand upon several of the issues raised in Peepeekisis's Letter of Comment and that several of the matters raised are beyond the jurisdiction of the Board.

The Applicants indicated that they were not aware of any potential impacts on Aboriginal interests that had not been identified in the Southern Lights applications or subsequent filings. The Applicants submitted that, in the event that there are more interests that are identified that may be impacted, they would meet with the Aboriginal organization or community that has identified an interest and work with that community to jointly develop a course of action.

The Board is of the view that those Aboriginal people with an interest in the Southern Lights applications were provided with the details of the Project and were given the opportunity to make their views known to the Board in a timely manner so that they could be factored into the decision-making process.

Further, the Board is of the view that the Applicants' consultation program was effective in identifying the impacts of the Project on Aboriginal people.

The Project would involve a relatively brief window of construction, with the vast majority of the facilities being buried. As almost all the lands

required for the Project are previously disturbed, are generally privately owned, are used primarily for agricultural purposes and are adjacent to an existing pipeline RoW, the Board is of the view that potential Project impacts on Aboriginal interests could be appropriately mitigated. The Board is therefore of the view that impacts on Aboriginal interests are likely to be minimal.

3.5 Project Design and Integrity

In examining pipeline and facility applications, the Board considers safety and integrity issues to ensure that companies design, construct and operate their facilities in a safe manner. The Board determines whether the proposed projects meet regulatory requirements concerning the safety of employees and the public and examines issues such as suitability of design, construction techniques, materials and control systems, as well as potential risks to pipeline integrity

The Southern Lights Project proposal has two distinct sub-projects: the Diluent Pipeline Project and the Capacity Replacement Project. The Diluent Pipeline Project involves the transfer and reversal of Line 13. The Capacity Replacement Project has two components – the LSr Pipeline and the Line 2 Modifications. Each of these two components has its own distinct engineering-related activities.

The following discusses the design and integrity issues that are common to both the Diluent Pipeline and the Capacity Replacement Projects.

3.5.1 General Design

The Line 13 Reversal consists of the flow reversal of the existing Canadian portion of the EPI Line 13 export pipeline. This pipeline currently starts at EPI's Edmonton terminal and has a Canadian terminus near Gretna. The existing 1 242 km Canadian portion of the pipeline was constructed in the 1950s and currently transports synthetic crude from Edmonton, to Clearbrook, Minnesota. ESL proposes to reverse the flow to enable the shipment of diluent, which has different flow characteristics, back to the Edmonton, terminal in Canada.

To accommodate any product that is being displaced by the Line 13 Reversal, ESL proposed a Capacity Replacement Project which has two main components: a new 288 km crude oil export pipeline called the LSr Pipeline, extending from Cromer to the United States border near Gretna; and modifications to Line 2, an existing EPI crude oil pipeline that runs from Edmonton and crosses the United States border near Gretna.

Drag Reducing Agent

The Applicants proposed to use a drag reducing agent (DRA) to reduce frictional pressure loss during the flow of the products being shipped on Line 2, Line 13 and the LSr Pipeline. MPLA/SAPL expressed concerns regarding the effects of DRA on the three pipelines, with respect to fouling and/or corrosion. The Applicants replied that the specific type of product proposed as DRA for the Southern Lights Project is not known to affect fouling and/or corrosion in the concentrations that would be used.

3.5.2 Standards, Regulations and Company Procedures

ESL indicated that it would adopt the most recent version of EPI's standards, specifications and procedures for the construction and operation of the Line 13 Reversal, as appropriate and applicable to the project. ESL and EPI indicated that both the Line 13 Reversal and the Capacity Replacement Projects would be designed, constructed and operated in accordance with applicable regulations and industry codes and standards, including the latest Board regulatory requirements. The Board's requirements are set out in the *Onshore Pipeline Regulations, 1999* (OPR-99), which incorporate by reference the latest Canadian Standard Association (CSA) standard Z662, *Oil and Gas Pipeline Systems* (CSA Z662). These regulations and standards in turn reference other standards that would be followed in the design.

In July 2007 an updated version of the CSA Z662 was published and the Applicants agreed that all references to CSA Z662-03 in the application for the Southern Lights Project should be replaced with CSA Z662-07 for each project phase from design to operation.

Pressure Monitoring and Management

The Applicants confirmed that both projects would comply with the overpressure control and overpressure protection requirements specified in CSA Z662-07. In addition, the Applicants indicated that they would perform and submit transient analyses to identify any operating conditions that may lead to the pipeline sustaining pressures beyond the operational limits and CSA overpressure limits. The Applicants committed to providing transient analyses for Line 2, Line 13 and the LSr Pipeline before the end of 2007.

Quality Management

The Applicants committed to implement a quality management plan to address the planning and construction of the projects. The quality management plan, consisting of a design quality management system, a materials quality management system and a construction plan, would be implemented to ensure that all applicable environmental, regulatory and statutory requirements are met, as well as to monitor and document evidence of compliance. The effectiveness of this system would be assessed through internal quality audits. The requirements and expectations for quality management and assurance that are consistent with OPR-99 would be applied to contractors, subcontractors and suppliers, as appropriate.

Integrity Management Program

The Applicants proposed to use EPI's pipeline and facility Integrity Management Program (IMP) to identify, assess and evaluate operational risks. The Applicants also indicated that the results of the integrity assessment are used to prioritize maintenance activities or projects to ensure that fitness-for-purpose tolerances are maintained. The IMP's primary goal is to prevent leaks and ruptures caused by duty-related degradation of the pipelines. The IMP includes, but is not limited to, the following specific elements:

- Corrosion Integrity Management Plan
- Cathodic Protection Program

- Crack Management Plan
- Stress Corrosion Cracking (SCC) Management Plan
- Mechanical Damage Management Plan
- In-Line Inspection Program
- Excavation Program
- Qualifications & Training Guideline

Views of the Board

The Applicants made commitments to revise or review the design of the Project. The results of the commitments to use the updated CSA version Z662-07 and to provide a transient analysis for all Project components before the end of 2007 may affect the final design of both the Line 13 Reversal and the Capacity Replacement Project. The Board requires the Applicants to comply with these commitments when developing their final design. The Board would also monitor the Applicants' compliance throughout the construction and operations phase of the Project. In addition, the Board would continue to monitor the Applicants' pipeline and facility IMP to ensure it is adequate, effective and being implemented appropriately. The Board is of the view that once the commitments are fulfilled, the pipeline design will be compliant with current standards relative to pipeline safety and integrity.

3.6 Construction and Operation

3.6.1 Construction Safety

The Applicants indicated that comprehensive health and safety plans would be developed for the construction of the Line 13 Reversal and Capacity Replacement Projects. These plans would address safety requirements, responsibilities and lines of communication during construction and commissioning. All field crews engaged on the projects would be trained and random internal audits would be carried out to ensure that personnel comply with the health, environmental and safety plan. Further, all field crews would be provided with a field handbook describing the main features of this plan.

Views of the Board

ESL and EPI would be required to file their comprehensive health and safety plans with the Board. Through onsite inspections, Board inspectors would verify compliance with these plans, regulatory requirements and the other commitments made during these proceedings. To assist Board inspectors in their activities, the Applicants would also be required by conditions to provide a detailed construction schedule and to report on a

monthly basis on construction progress. This would allow Board inspectors to focus and prioritize future oversight activities.

3.6.2 Pipeline Systems Control

EPI stated that their control room operators monitor and control its pipelines and facilities through a supervisory control and data acquisition (SCADA) system. EPI indicated that its SCADA system allows operators based at the Edmonton control centre to remotely monitor and control all elements of the pipeline systems, including the pipelines, tanks, pump stations, valves and custody transfer metering. The system also monitors line pressures, flow rates, gas and fire detectors and other safety systems.

EPI indicated that it uses a real-time transient model (RTTM) computer program for leak detection. EPI's application of the RTTM is referred to as the material balance system (MBS). EPI also stated that the MBS is designed to meet current regulatory and standard requirements of OPR-99 and CSA Z662-03 Annex E, and would meet CSA Z662-07. MBS alarms are passed to the SCADA system and appear on the SCADA monitors.

Views of the Board

CSA Z662 is incorporated by reference in the Board's OPR-99. While EPI stated that its leak detection system is designed to meet the latest version of the standard, the Board notes that detailed designs are not completed. The Board would examine the transient analyses (see Section 3.5.2: Standards, Regulations and Company Procedures) and their potential impact on overall pipeline systems control, including leak detection, and detailed design components. During the Board's review, additional information may be requested.

3.6.3 Emergency Preparedness and Response

An Emergency Response Plan (ERP) is in place for all of EPI's existing pipelines and facilities between Edmonton and Gretna. EPI stated that the existing ERP contains requirements for emergency response preparedness (including equipment, training and exercises), emergency response actions (including notification, implementation of an emergency management system, safety precautions for workers and the public), and a range of containment, recovery and clean-up actions for various circumstances. The ERP includes provisions for addressing both small spills and large releases.

EPI has committed to modifying this plan to incorporate the LSr Pipeline and the Line 2 Modifications but maintained that the plan would not require modifications to address the reversal of Line 13 for diluent service.

Views of the Board

EPI's existing ERP is on file with the Board. The Board finds that the measures proposed by the Applicants to deal with emergency preparedness and response are appropriate for the scope of the proposed Projects.

3.7 Land Matters

The Board requires companies to provide a description and rationale for both permanent and temporary lands that will be required for a project in order to assess the extent of new lands to be affected by the project. In addition, companies are required to advise the Board if they are using any existing land rights or if there are areas where no new land rights are required.

The Board also requires a description of the land acquisition process as well as the status of acquisition activities. Companies are requested to provide the Board with a copy of the sample notices provided to landowners pursuant to subsection 87(1) of the NEB Act as well as all forms of the acquisition agreements. Matters pertaining to routing, lands rights and land acquisition for the Southern Lights Project are described in relation to each Project.

Diluent Pipeline Project

The Line 13 Transfer involves the transfer of existing assets and EPI's land rights within the existing Line 13 RoW. The Line 13 Reversal will include the portion of the EPI Mainline pipeline from EPI's Edmonton terminal located in the SE ¼ -5-53-23W4M, Alberta to the Canada/US border near Gretna in the SE ¼- 4-1-1 WPMMB. EPI presently holds the necessary land interests under easements for the EPI Mainline pipeline and Line 13 is located within that easement.

Under the Transfer Agreement, EPI will grant to Enbridge Southern Lights LP the licence, right and interest for the Line 13 RoW for a width of 1.5 metres on either side of the centre line of Line 13 for the purposes of operating, maintaining and repairing Line 13. Included will be the right of ingress and egress over the EPI RoW to and from Line 13.

The Line 13 Reversal would involve modifications to pumps and valves at existing pump stations on Line 13 to permit the pipeline to operate in a reverse direction. Since all of the work would occur within the existing pumping stations and valve sites on Line 13 RoW, no new land rights are required for this project. There are no routing or land concerns associated with this part of the Project.

ESL requested that the Board grant an order pursuant to section 58 of the NEB Act authorizing the construction and operation of the Line 13 Reversal facilities and exempting these facilities from the provisions of sections 30 and 31 of the NEB Act.

Capacity Replacement Project

Since all of the Line 2 Modifications would be made to existing Line 2 pipeline facilities, and as no new lands are required, there are no routing or land concerns associated with this part of the Project. No additional lands are required for the existing LSr Pipeline pumping facilities which are located at Cromer, Glenboro and Manitou. A total of 0.5 ha would be required for 12 new valve sites.

Routing of the LSr Pipeline will be located within or alongside and contiguous to the existing EPI RoW for approximately 90 percent of its 288 km length and approximately 28 km of new non-contiguous RoW will be required.

The width of the new RoW to be acquired will vary in order to create a consistent, contiguous RoW width of 36.6 m along the LSr Pipeline route.

The 28 km of new, non-contiguous RoW will deviate from the existing corridor at 11 locations to avoid wetlands, shelterbelts, burial grounds, a farmyard, a residence and existing infrastructure. The width of the RoW in these locations will be 18.3 m.

The estimated land area required for the permanent RoW and temporary workspace is approximately 377 ha and 697 ha, respectively.

In order to construct, operate and maintain the LSr Pipeline facilities, land must be acquired from private landowners and the Crown in Manitoba. EPI intends to obtain all land rights by negotiating directly with the registered owners of the land. The Applicant's land acquisition process commenced in mid-March 2007 and is expected to be completed by May 2008.

EPI maintains that it will work with landowners to apprise them of the likely impacts of construction and negotiate fair and reasonable compensation in the form of direct reclamation or monetary equivalent.

Views of the Board

The Board finds that EPI's anticipated requirements for permanent and temporary land rights are reasonable. The land rights documentation and acquisition process proposed by EPI are also acceptable to the Board. It is the Board's view that maintaining a consistent, contiguous RoW width of 36.6 meters for approximately 90 percent of the LSr Pipeline route is acceptable in order to accommodate all of the pipes within the EPI easement. Further, EPI only deviated from the existing RoW in circumstances where there would have been potential adverse effects on other land uses including those relating to the environment.

Pursuant to section 58 of the NEB Act, the Applicants are seeking an exemption from section 31 of the NEB Act which would relieve them from having to file a Plan Profile and Book of Reference (PPBoRs) in respect of the Line 13 Reversal facilities, the LSr Station Facilities and the

Line 2 Modifications. The effect of this relief would be to negate the need for the detailed route hearing process.

As the construction and installation of the Line 13 Reversal facilities, LSr Station Facilities and the Line 2 Modifications would occur at existing EPI stations and no new lands would be required, the Board finds it to be appropriate to grant the requested exemptions from filing PPBoRs in respect of those facilities.

Chapter 4

Diluent Pipeline Project

4.1 Transfer of Line 13

Line 13 is currently part of the EPI Mainline system and transports crude oil from Edmonton to the Canada/US border near Gretna. The Canadian portion of the Line 13 Transfer will include the Line 13 pipeline, the Line 13 pumping facilities, other ancillary equipment attached to the Line 13 pipeline pumping facilities, and the provision of necessary land rights associated with the Line 13 RoW and pumping facilities.

4.1.1 Operations

After the execution of the Transfer Agreement, Enbridge Southern Lights LP would engage EPI as its contract operator. As such, EPI would provide administrative, operating, and maintenance services to Enbridge Southern Lights LP in respect of the commercial operation of Line 13 including:

- pipeline operations;
- control centre;
- engineering services;
- land; and
- general and administrative.

4.1.2 Transfer Price

The Applicants seek orders pursuant to Part IV and subsection 129(1.1) of the NEB Act which are necessary to effect the transfer of Line 13 in accordance with the terms and conditions set out in the Transfer Agreement. The transfer price outlined in the Transfer Agreement is the net book value of the costs of building the LSr Pipeline and the Line 2 Modifications at the closing date of the Line 13 Transfer (proposed to be at the latest 30 June 2010) plus the cost of removing the Line 13 linefill.

The commercial arrangement underpinning the Project is that, in consideration for EPI transferring Line 13 out of EPI Mainline service, Enbridge Southern Lights LP would pay to replace its capacity with the new LSr Pipeline and the Line 2 Modifications. The *Board Oil Pipeline Uniform Accounting Regulations* (OPUAR) require that, where facilities are purchased from an affiliated company, the original cost of the facilities and accumulated depreciation is recorded in the accounts of the purchasing company. The Applicants therefore applied for the exemption, pursuant to subsection 129(1.1) of the NEB Act, from this requirement in the OPUAR. The Applicants further requested that the EPI Mainline system rate base be reduced by

the transfer price such that the net book values of the LSr Pipeline and Line 2 Modifications are effectively offset in the Mainline system rate base as of the closing date rather than transferring the amount of the gain or loss from Account 31 (Accumulated Depreciation – Transportation Plant) or Account 32 (Accumulated Amortization – Transportation Plant) to Account 402 (Extraordinary Income) or to Account 422 (Extraordinary Income Deductions), as applicable and as prescribed by section 40(2) of the OPUAR.

Views of the Board

The OPUAR require that where facilities are purchased from an affiliated company, the original cost of the facilities and accumulated depreciation is recorded in the books of the purchasing company. The Board notes that none of the intervenors objected to the proposed transfer price or the sale and purchase of Line 13. As the facilities to be transferred from EPI to Enbridge Southern Lights LP would be changing from oil transportation service to diluent transportation service, the Board is of the view that it would be appropriate for Enbridge Southern Lights LP to pay to replace the annual capacity resulting from the transfer of the facilities from oil transportation to diluent transportation service.

The Board is of the view that as part of the Project, leave of the Board pursuant to section 74 for the sale and purchase of Line 13 would be in the public interest. Further the Board is of the view that the proposed methodology to determine the transfer price is reasonable, and that the Applicants may be exempted from subsection 15 (4) of the OPUAR.

The Board is of the view that it would be appropriate to reduce the EPI Mainline system rate base by the transfer price such that the net book values of the LSr Pipeline and Line 2 Modifications are effectively offset in the Mainline system rate base as of the closing date, rather than transferring the amount of the gain or loss from Account 31 (Accumulated Depreciation – Transportation Plant) or Account 32 (Accumulated Amortization – Transportation Plant) to Account 402 (Extraordinary Income) or to Account 422 (Extraordinary Income Deductions), and as applicable, as prescribed by section 40(2) of the OPUAR.

4.2 Line 13 Reversal

4.2.1 Project Design

ESL stated that the Line 13 Reversal design does not require any Mainline pipeline construction and would involve the following engineering-related works:

- modifications to the inlet and outlet piping of 16 existing Line 13 pumping facilities, which are located at existing EPI pumping stations on Line 13, to enable the reversal of flow in the pipeline;

- modification of six existing check valves;
- installation of delivery equipment and meters at the existing Line 13 pumping facilities located at the Kerrobert, Hardisty and Edmonton, pump stations;
- installation of four DRA injection facilities at the existing Line 13 pumping facilities located at the Gretna, Souris, Cromer and Hardisty pump stations;
- modification of the existing Line 13 scraper trap facilities located at the existing Kerrobert, Regina and Cromer, pump stations, as well as the existing scraper trap facility located near Kelso, Saskatchewan at Kilometre Post 899.9; and
- idling of the Line 13 pumps at the Edmonton pump station.

ESL indicated that Line 13 pre-reversal work would begin in 2009. Subject to the necessary approvals, the above-mentioned works would be completed in time for an in-service date of 30 June 2010. The Line 13 Reversal may be advanced if additional crude export capacity is available sooner.

Line Pipe

Line 13 has been owned and operated by EPI and its predecessors since it was originally constructed in 1950 with a section constructed in 1952.

Sections of Line 13 were constructed with outside pipe diameters (OD) of 406.4 mm (NPS 16), 457 mm (NPS 18) and 508 mm (NPS 20) and with wall thicknesses ranging from 7.14 mm to 8.73 mm using grades X46 and X52 pipe. Line 13 is externally coated with a coal tar coating.

ESL stated that the works associated with the reversal and re-deployment of Line 13 to diluent service would not alter Line 13's external conditions. Therefore, any imperfections or defects influenced by, or associated with, the external coating condition should not be influenced by the reversal of flow and would continue to be managed through the existing IMP.

In addition to ensuring that Line 13 is structurally sound and is fit for its new intended purpose, ESL indicated it would have to undertake engineering-related physical changes to components and facilities to enable the product to flow in the reverse direction. ESL stated that, during detailed design, a review would be conducted to re-examine the location and purpose of the six existing check valves. ESL anticipates that all of the check valves would have to be modified to accommodate the change in flow direction. In addition, ESL stated that the review may identify that some check valves may have to be relocated depending on their purpose. If the check valves are in good condition, they would be reused in accordance with CSA Z662 requirements. If the existing valves are not in good condition or do not meet CSA Z662 requirements, they would be replaced with new check valves. In addition, modification to existing scraper traps to accommodate the latest in-line inspection tool models would be undertaken.

Pumping Facilities

Other engineering-related physical works associated with the change in product flow direction include the reversal of the inlet and outlet piping at the existing 16 Line 13 pumping stations

identified in the application. Delivery facilities and metering would be installed at three stations and DRA units would be installed at four existing pump stations.

4.2.2 Integrity

Following the acquisition of Line 13 by ESL, the pipeline would remain operated, controlled and monitored by EPI. Enbridge Southern Lights LP would contract with EPI for Line 13 to be operated pursuant to the existing EPI standards and programs, which include the IMP (described in section 3.5.2).

4.2.2.1 Operational and Integrity Management History of Line 13

Since its construction in the early 1950s, sections of Line 13 have undergone various reconfiguration phases and have operated in refined products service as well as in crude oil service. The pipeline currently includes line pipe sections of different specifications and pipe manufacture and is in synthetic crude oil service. The original pipe joints were fabricated using flash welded or electric resistance welded (ERW) processes. Pre-1970s ERW welds were susceptible to flaws such as non-metallic inclusions, lack of fusion, low toughness and hook cracks.

In 1993 and 1994, hydrostatic pressure tests were conducted in order to obtain Board approval for increasing the maximum operating pressures (MOP) on segments of Line 13 between Regina and Gretna. Several test failures occurred and were confirmed to be caused by long seam defects that had not grown during historical operations, but failed when subjected to higher pressures than the defects had ever experienced.

In 2002, an in-service leak occurred on the Regina to Gretna segment due to a hook crack that survived the 1993 and 1994 tests. A metallurgical analysis concluded that the original hook crack, introduced during pipe manufacture, had extended by a fatigue growth mechanism. As explained in the reports dated 2003 and filed in these proceedings, the operational changes associated with the 1990's pipeline expansion program rendered the existing Line 13 imperfections susceptible to pressure cycle-induced fatigue. Subsequently, pre-existing non-injurious pipe manufacturing flaws that withstood the 1993 and 1994 hydrotests could potentially grow until failure.

Management of Crack Features

EPI implemented a crack in-line inspection (ILI) program for Line 13 in 2003, using the GE PII ultrasonic crack detection (USCD) tool. EPI submitted that the USCD tool is capable of accurately locating and sizing long seam defects to allow for targeted repairs consistent with CSA Z662 requirements. EPI specified that, at this time, one set of inspections with the USCD tool has been completed on the Kerrobert to Gretna (comprising Regina to Gretna) portion of Line 13, while the remaining Edmonton to Kerrobert portion is scheduled for 2008.

The Board requested clarification that there were no other crack features, such as SCC or cracking in dents, that pose significant integrity risks on Line 13. The Applicants indicated the pipeline is externally coated with coal tar which has historically performed very well at

protecting it from external corrosion damage, and EPI qualified the SCC threat as low. Since approximately 1996, EPI has monitored the entire Line 13 for SCC. No SCC was reported through field non-destructive examinations (NDE) performed on Line 13 or through other maintenance activities where a crack ILI had been conducted. With respect to cracking in dents, EPI noted that a failure due to a cracked dent is unlikely given Line 13's operational history. If warranted by future information gathered through integrity excavations for example, the Applicants committed to apply future new inspection tools capable of detecting dents with secondary features.

EPI confirmed that the primary cracking threat on Line 13 is fatigue crack growth of existing manufacturing flaws. EPI analyzes pressure cycling data on a quarterly basis in order to predict the fatigue life of cracks and estimated that any existing crack would not fail within 20 years. Future crack re-inspection intervals were therefore conservatively set at 10 years, subject to an annual re-evaluation.

Management of Corrosion and Geometry Features

The Applicants submitted that corrosion features are primarily prevented through Line 13's external coal tar coating or recoats with high integrity coatings, which are supplemented by the cathodic protection system. Defects are monitored through excavation findings and regular metal loss ILIs since 1972. Regarding geometry features such as dents, the entire pipeline has been examined by specific ILIs, and EPI is in the process of completing excavations related to the latest tool inspections dated 2006. The Applicants also committed to providing the comparison between field findings and geometry ILI data.

4.2.2.2 Impact of Line 13 Reversal Project on Pipeline Integrity

Revised Pressure Profiles

The reversal of flow for diluent service on Line 13 requires the reversal of pumps. Typically, pipeline segments that are currently upstream of pump stations and that underwent relatively low suction pressures would become located downstream of pumps and would undergo higher discharge pressures.

The Applicants anticipate that segments immediately upstream of Langbank, Saskatchewan, Glenboro, and Gretna would be subjected to operating pressures averaging eight times their current and historical operating values. Nevertheless, the proposed operating pressures would remain within the MOP currently approved.

Diluent Service

According to the Applicants, Line 13 materials and components are designed for low vapour pressure (LVP) hydrocarbon liquids and, to date, the pipeline sections have transported refined products, crude oil and synthetic crude oil. The diluent to be shipped on Line 13 would consist of natural gasoline or light hydrocarbon streams recycled from refineries. ESL confirmed that its diluent specifications and pipeline operating parameters, such as temperature and pressure, would ensure that Line 13 remains in LVP service with all transported products in liquid phase.

Further, the Applicants indicated that the flow rate, temperature and type of product being shipped would not significantly change after reversal of Line 13. Therefore, the rate of corrosion is not expected to impact metal loss ILI intervals.

4.2.2.3 Assessment and Validation of Pipeline Integrity

Engineering Assessments Before and After Reversal

The application did not include an engineering assessment (EA) on the reversal of Line 13; nor did it include a commitment to perform one. The Applicants submitted that preliminary EA work had begun and estimated that post-reversal pressure cycles would be less severe than with current Line 13 service. The Applicants stated that final calculations related to crack growth rates require actual pressure profiles and pressure cycle data in order to verify preliminary estimates in a final EA post-reversal. They proposed to finalize and submit an EA related to crack growth rates when Line 13 would be reversed and new pressure profiles with pressure cycle data become available. The Applicants added that crack growth rates have no immediate impact on pipeline integrity and that their current Line 13 fatigue assessment is believed to be a generally conservative estimate of post-reversal conditions.

Potential Requirement to Hydrotest

The Applicants considered the need for hydrostatic pressure testing but determined that hydrotesting was not required. This decision was based upon future operating pressures not exceeding the existing MOP and the ILI program implemented on Line 13.

EPI reported that its use of ILI technology to manage pipeline integrity and reduce the likelihood of failures has been successful. Given EPI's most recent experience on 32 km of Line 3 downstream of Hardisty, the USCD tool was accurate in finding all defects that would have otherwise failed below the hydrostatic test pressure. According to the Applicants, this crack inspection device also has the ability to detect near-critical features that would not fail during a hydrotest but that could become injurious with time. However, the Applicants acknowledged that the probability of detection (POD) of the USCD tool is not 100 percent (the vendor specifies 95 percent); nor is it 100 percent accurate in sizing defects. The Applicants committed to provide the results of the USCD tool's reliability analysis as part of the first EA required by the Board.

The Board proposed that an approval for the Line 13 Reversal require the Applicants to hydrotest all, or portions of Line 13, should the filed EA insufficiently demonstrate that the pipeline may safely commence operation in diluent service. The Applicants commented that other options such as additional non-destructive tests, inspections or investigations should not be precluded.

Views of the Board

The Board expects that ESL will be informed of EPI's historical and ongoing experience with Line 13 operations and integrity activities for the purpose of ensuring the integrity and safe operation of Line 13. Both companies committed to following OPR-99 and CSA Z662-07 requirements and to adopt EPI's existing IMP.

The Board notes that clause 10.14.2.2 of CSA Z662-07 addresses the integrity of existing pipeline systems and states:

> Where the operating company intends to operate the pipeline system at a pressure that is significantly higher than the established operating pressure, and which can therefore lead to failures in the pipeline system, it shall conduct an engineering assessment to determine which portions can be susceptible to failures and whether such portions are suitable for the intended operating pressure.
>
> Note: For example, when the operating company intends to increase the operating pressure of a pipeline system that has historically operated well below its maximum operating pressure, such an engineering assessment is required.

In addition, clauses 10.14.2.3 and 10.14.6.4 of CSA Z662-07 state that pressure testing may be necessary where the EA indicates that portions of the pipeline system are susceptible to failures or where information is unavailable to complete the EA.

The Board recognizes that EPI has implemented corrective actions and no occurrence of line pipe failure has been reported on Line 13 since the 2002 leak. However, the presence of long seam manufacturing flaws susceptible to pressure cycle-induced fatigue growth remains a concern due to the lack of data provided to the Board relative to this integrity hazard. The Board also considered the pipeline's condition, the historical experience gained after numerous hydrotest failures and the recognition that the expansion program in the 1990s has rendered sections of Line 13 susceptible to fatigue cracking. Further, given the current lack of available data and as the proposed diluent service consists of a reversal of flow, where some pipe sections would be subjected to average operating pressures nearly eight times as high as historical pressures, the Board is of the view that even if current MOP levels are respected, an EA is necessary in accordance with clause 10.14.2.2 of CSA Z662-07.

As a result, the Board would require the Applicants to file an EA at least nine months prior to the Line 13 Reversal in order to confirm ongoing pipeline integrity. Should information be unavailable or of limited reliability and therefore require substitutive information, the Applicants may conduct additional non-destructive tests, inspections or investigations in advance of filing the EA and eventually propose subsequent options for the Board's consideration. Nonetheless, sufficient information must be provided no later than nine months prior to reversal in order for the Board to determine the suitability of Line 13 to operate in diluent service. The Board requires such assurance by that date in order to avoid mutual time constraints in the event that hydrotesting would be contemplated. As

outlined in the proposed conditions, the Applicants would be required to hydrotest all, or portions of Line 13, should the Board determine that the EA does not adequately address its concerns.

The Board is cognizant that the improved capabilities of high-resolution ILI tools enable pipeline companies to optimize the scheduling of inspection and repair intervals. The Applicants' reliance and ongoing confidence in ILI technology is noted, but the Board cautions that marginal inaccuracies associated with a POD of 95 percent for the USCD tool may become significant. Furthermore, portions along the 1 242 km of Line 13 have only undergone one USCD tool run to date, while no crack ILI will have been performed on the remaining portions (which approximate half of the Line 13 length) until 2008. The Board would require the Applicants to demonstrate that they possess sufficient validated data on crack locations, sizes and growth rates along the entire pipeline. Additionally, the Board reminds the Applicants of their commitment to include in the EA an analysis of the USCD tool's reliability, as well as the comparison between geometry ILI data gathered in 2006 and excavation findings, specifically regarding potential cracked dents. The Board refers the Applicants to the American Petroleum Institute standard (API) 1163, *In-line Inspection Systems Qualification Standard* (or another analogous standard) for guidance on the qualification of the ILI process and results.

The initial EA would be revised no later than six months after reversal of flow. The revised EA shall incorporate actual operating data of Line 13 in diluent service to adjust estimated defect growth rates and ILI intervals as necessary.

4.2.3 Construction and Operation

4.2.3.1 Joining Programs

The modifications to Line 13 may require welding on liquid-filled piping. If welding occurs on liquid-filled pipeline components with a carbon equivalent (CE) greater than 0.50 percent, then according to subsection 38(3) of the OPR-99, the company is required to submit the welding specifications and procedures and the results of the procedure qualification tests to the Board for approval.

Views of the Board

The Board requests and reviews the joining programs when welding on materials with a CE greater than 0.50 percent is performed to verify that appropriate welding procedures are employed in order to prevent cold cracking in steels with high CEs. The potential for delayed hydrogen cracking increases proportionally with the CE of the base materials to be joined. This effect may be compounded by the quenching effects of flowing liquids within the pipeline on weld deposits placed on the surface

of in-service pipelines. Accordingly, the Board requires that the joining programs for the Line 13 Reversal be filed with the Board.

4.2.3.2 Leave to Open Exemption for Line 13 Reversal Facilities

ESL requested that the Board grant an order pursuant to section 58 of the NEB Act authorizing the construction and operation of the Line 13 Reversal facilities and exempting these facilities from the provisions of sections 30 and 47 of the NEB Act.

4.2.3.3 Line Fill Removal and Diluent Line Fill

ESL and EPI indicated that they would jointly develop a plan for the removal of the line fill currently in Line 13. They stated that this plan would provide for an efficient and cost-effective manner to relocate EPI's line fill from Line 13 and to other EPI facilities. EPI committed to provide the line fill removal plan to the Board before its implementation.

Upon the completion of necessary construction and start-up activities to facilitate the delivery of diluent, ESL would commence filling the reversed Line 13 with diluent supplied by ESL's shippers in accordance with the TSA. ESL would consult with its shippers to reach agreement on provision of diluent line fill in a timely and cost-effective manner (Diluent Line Fill Plan). Before commencing line fill activities, ESL also committed to advise the Board of the Diluent Line Fill Plan.

Views of the Board

EPI will design the Line 13 Reversal facilities in accordance with OPR-99 and CSA Z662-07. During construction, Board inspectors would verify EPI's implementation of its designs and the quality control provided. Through its construction oversight, the Board will monitor construction and commissioning to ensure that standards are met. The Board finds EPI's commitment to submit its line fill removal plan and its Diluent Line Fill Plan before implementation satisfactory. In light of these measures the Board is satisfied that the Line 13 Reversal Project facilities could be safely opened for transmission and that no requirement for a leave to open order would be required.

4.2.3.4 Emergency Preparedness and Response

ESL stated that EPI's existing ERP includes emergency response resources, environmental sensitivities and control points that have been specifically identified for Line 13. ESL further stated that all aspects of their ERP would be applicable for a pipeline transporting diluent and no additional measures would be required.

Several interested groups expressed concerns about the crossing of the South Saskatchewan River. Concerns were raised over the ability of the Applicants' staff to reach the South Saskatchewan River pipeline crossing in a timely manner in the event of a spill or leak. They also expressed concern with how emergency measures are coordinated with local authorities

downstream and the quantity of hydrocarbons that could enter the South Saskatchewan River before the pipeline was shut down. Interested groups had particular concerns about the threat of a spill or leak on drinking water and recreational use of the river downstream of the crossing.

ESL committed to meeting with the Board after the pipeline reversal has taken place and the pipeline is in operation, to discuss its emergency response plans in relation to the South Saskatchewan River.

Views of the Board

The Board considers it prudent for ESL to conduct an emergency response exercise at this river crossing. The Board would require ESL to conduct the exercise within six months of the pipeline being placed in service and to report the results to the Board.

The Board also intends to meet with ESL to discuss ESL's emergency response program as it relates to the South Saskatchewan River crossing when the pipeline is operational.

4.2.4 Part IV Matters

4.2.4.1 Appropriateness of Contracted Capacity on Common Carrier Pipeline

Subsection 71(1) of the NEB Act requires that an oil pipeline company offer service to any party wishing to ship oil on its pipeline. Where capacity on an oil pipeline is contracted, the Board examines the open season process and the capacity to be made available for spot shipments in considering whether the pipeline is acting in a manner consistent with its common carrier obligations.

4.2.4.2 Open Season and Available Capacity

EPI advised that during its first open season, it received commitments exceeding the planned 28 600 m^3/d (180 000 bbl/d) capacity for the diluent pipeline. Committed shippers were prorated to an aggregate maximum of 25 740 m^3/d (162 000 bbl/d) to retain a portion of the capacity for spot shippers. Subsequently, there were terminations of commitments totalling 13 506 m^3/d (85 000 bbl/d), resulting in committed volumes totalling 12 234 m^3/d (77 000 bbl/d).

A second open season, which was directly communicated to 32 companies including all companies that had previously expressed an interest in the Project, was offered on similar terms and conditions with no further shipper commitments. The only term offered was for 15 years. ESL foresees that future open seasons, with somewhat similar terms and conditions to the existing TSA, are possible. The term would be for the remainder of the 15-year term undertaken by current committed shippers and there would be some adjustments to the proposed TSAs given that certain termination clauses would no longer be relevant. ESL also noted that the current committed shippers have a right of first refusal on any of the capacity to be offered in a future open season.

Views of the Board

In concept, the Board is not opposed to combinations of contracted capacity on common carrier pipelines. In previous decisions, the Board has found that an oil pipeline acts in a manner consistent with its common carrier obligations when an open season is properly conducted and where the facilities are either readily expandable or capacity is left available for monthly nominations. In this case, the Board is satisfied that the open season conducted granted all potential shippers a fair and equal opportunity to participate.

With respect to the holding of another open season, the Board notes that ESL has provided its committed shippers with the right of first refusal should another open season be contemplated. The Board notes that, during the hearing, no potential shipper came forward to indicate a firm intention to ship on an ongoing basis, nor was any view expressed disputing the fairness of ESL giving its committed shippers the right of first refusal.

4.2.4.3 Method of Regulation

For the purpose of toll and tariff regulation, ESL requested that it be regulated as a Group 2 company on a complaint basis, provided that Group 2 status would not prevent the Board from approving its toll and tariff principles. If that outcome were not possible, ESL requested Group 1 status along with approval of its tolling principles and tariff. ESL stated that there was no industry-wide negotiation, but rather the toll principles and the tariff were the product of negotiation between ESL and those committed shippers that signed the TSA.

Views of the Board

When determining whether a company should be designated as Group 1 or Group 2, the Board has previously considered the size of the facilities, whether transportation services are provided for third parties, and whether the pipeline is regulated under the traditional cost of service methodology. Given that the toll principles have been negotiated with ESL's committed shippers and that there is only one line and one product being shipped, the Board has concluded that ESL should be designated as a Group 2 company. ESL is therefore required to comply with the requirements of subsection 5(2) of the OPUAR and all toll filings pursuant to 60(1)(a) of the NEB Act shall be accompanied with supporting documentation for the tolls.

The Project contains the first diluent line to be regulated by the Board. As such, the Board is of the view that additional regulatory oversight is appropriate to ensure that all shippers that nominate volumes to the line are granted reasonable access and that the premium in the toll for uncommitted volumes does not become an unreasonable impediment to

potential spot shippers. Therefore, the Board directs ESL to file information outlining the transported diluent volumes, including volume and revenue from diluent shipments. This quarterly information is to be reported separately for both committed and uncommitted shipments and is to be filed annually. This information is to be filed for a trial period of the first five years of Line 13 operation. The Board also directs ESL to annually file summary information on new requests for committed service. The information filed is to include the number of requests, volumes and number of shippers. If disputes arise respecting the tolls charged or the term of access to, or transportation on, the pipeline, all shippers whether having signed long-term TSAs or not, would have the right to complain to the Board.

The Board also notes that, while the diluent market is expected to evolve, there is always some possibility of participation by affiliates of the regulated pipeline entity. To ensure that such participation does not trigger conflict of interest concerns, the Board directs that ESL file for approval of a Code of Conduct at least 60 days prior to the operation of the reversed Line 13, addressing the following matters:

- mitigation of market power and promoting fair competition;
- prevention of unduly preferential treatment;
- prevention of cross-subsidization;
- transfer pricing;
- governance of separation of business;
    - sharing of employees and other resources;
    - separate operations and financial;
    - separate management;
    - physical separation;
- confidentiality;
- compliance plan, audit and penalties;
- dispute resolution, and
- regulatory oversight.

4.2.4.4 Toll Principles

ESL sought approval, under Part IV of the NEB Act, of the tolling methodology that will be used to establish the tolls for the reversed Line 13 in accordance with the terms and procedures detailed in the toll principles in the TSA. ESL and the committed shippers have contractually agreed on a method to calculate the tolls. ESL stated that the toll principles agreed to by the committed shippers are an essential element of the contractual relationship between itself and the

committed shippers in order to provide a level of certainty in respect of tolls to be charged over the initial 15 years of the Line 13 Reversal.

ESL proposed to offer two types of service on the reversed Line 13. The first type of service is for committed shippers, those who have executed a TSA and provides for the transportation of a stated daily volume for an initial term of 180 calendar months. The second class of service, 'uncommitted', is for shippers that have not entered into a TSA or for those committed shippers that wish to transport volumes in excess of the committed volumes as agreed in the TSA. The proposed toll for the second class of service will be at least equal to twice the committed toll.

In general, the toll principles provide for tolls to be established on a full cost of service basis. Tolls for any calendar year would be subject to an adjustment to be made after the year end of such calendar year to reflect differences between the estimated cost of service and the actual cost of service, revenue from uncommitted tolls and power savings for volumes of diluent that are not transported all the way to Edmonton, Alberta.

The key toll principles include the following main points:

- General:
  - cost of service methodology
  - a true-up of certain elements of the revenue requirement in the year following
  - a ratio of tolls for uncommitted volumes to those of committed volumes, no less than two times.
- Rate base:
  - to include capital costs and Allowance for Funds Used During Construction related to acquiring and transferring Line 13, all costs associated with the Line 13 Reversal, and all development costs associated with the Line 13 Reversal and the Capacity Replacement costs
- Return on rate base:
  - deemed capital structure of 70 percent debt and 30 percent equity
  - a nominal return on equity between 10 percent and 14 percent depending on the variance between actual capital costs and the September 2006 estimate
- Income tax allowance:
  - income tax allowance as if ESL were a stand-alone pipeline transmission company on flow-through basis
- Revenue includes (among other items):
  - 100 percent of revenues received by carrier from transporting uncommitted volumes, if volumes are less than 23 800 m^3/d (150 000 bbl/d)
  - 75 percent of revenues received by carrier from transporting uncommitted volumes, if volumes are more than 23 800 m^3/d (150 000 bbl/d)

The Applicants stated that the proposed transfer price of Line 13 ensures that there is no net change to the Canadian Mainline rate base and the capital structure. The Applicants further stated that there would be efficiency gains for the Mainline shippers through the transfer of Line 13 and EPI's role in the ongoing operations of the diluent line and through the incremental revenue from the alternative use of Line 2 breakout tankage at Cromer.

Other features not listed as key principles include the right of first refusal to current committed shippers in the case of a future request for an open season.

ESL filed evidence of Kathleen McShane of Foster Associates (McShane) in support of the reasonableness of using a deemed common equity ratio of 30 percent and a base common equity return of 12.0 percent.

Ms. McShane identified the following specific strengths of the Southern Lights Project:

- the 15-year term of the TSAs;
- the cost of service methodology limiting the pipeline's exposure to cost and volume risk over the term of the TSA;
- creditworthiness of committed shippers; and
- strong economic fundamentals of the oil sands development.

The specific risks or weaknesses of the project were cited as:

- beyond the 15-year term of the TSAs, the pipeline will retain volume risk;
- the equity return will be locked in for 15 years; and
- equity investors are taking some risk, for example fisk of the following:
  - construction costs overruns; and
  - development costs, if the project does not proceed.

Ms. McShane provided an estimate of the appropriate range for returns on equity for comparable risk. This evidence submitted comparisons with returns on other NEB-regulated pipelines (Trans Mountain Pipeline, Trans-Northern, Maritimes and Northeast Pipelines, Alliance, Brunswick and the proposals for the Mackenzie Valley pipelines.) Ms. McShane acknowledged that several of the comparables are negotiated returns and that those are more likely to be higher than the application of results from the Board's return on equity formula.

ESL also requested that the Board approve its diluent tariff. This tariff addresses items that are contained on a liquids pipeline tariff, including quality specifications, equalization adjustments, tenders and nominations, and payments and carrier's lien.

Views of the Board

The Board notes that the toll principles and diluent tariff were the result of agreements with ESL's committed shippers. During the hearing, no

intervenor objected to the tolling principles. The Board is of the view that the negotiation process is a give and take process in which a party might give on an otherwise important issue to gain a favourable overall outcome. The Board, therefore, accepts the proposed toll principles and tariff as a package. Accordingly, the Board approves the applied for toll principles and tariff for the Line 13 Reversal.

As a common carrier, ESL must continue to provide service with reasonable terms and conditions. The common carrier obligation was discussed in detail in the Board's Reasons for Decision in MH-4-96 addressing Pan Canadian Petroleum Limited's Request for Service, wherein the Board noted that a series of commercial and regulatory decisions over many years had led to the development of physical and regulatory impediments to access for NGL to the lowest cost system. In the course of ruling on the specific access request that was the subject of the application, the Board commented at page 14:

> While the Board's decision in this case is intended to alleviate the immediate obstacles faced by PanCanadian, which seeks to become a new shipper of record of NGL, the Board considers that, over time, others may wish to obtain the same, or similar, rights in order to compete effectively in the NGL market. In this connection, the Board has a responsibility to ensure that conditions of access to oil or other pipelines facilitate the operation of broad market forces here as in other parts of the hydrocarbon sector of the economy and that the most efficient and effective energy transportation services are available to all potential shippers of NGL.

The Board is of the view that it has a similar responsibility in this case and will therefore monitor the application of the approved toll principles to ensure that they will continue to result in just and reasonable tolls.

Chapter 5

Capacity Replacement Project

5.1 Project Design

The following describes the overall engineering-related works and issues associated with the two components of the Capacity Replacement Project.

5.1.1 Line 2 Modifications

This component of the Capacity Replacement Project does not require any new pipeline construction or modifications to the existing 610 mm (NPS 24) OD 1950s-era Line 2 pipe, pipeline valves or scraper facilities. The project consists of modifications to Line 2 to increase the annual capacity to 70 300 m^3/d by adding DRA injection units at specific existing Line 2 pump stations. In addition, the Line 2 Modifications includes pump and motor modifications and replacements at selected Line 2 pumping facilities.

After performing a hydraulic analysis of the entire length of Line 2 to determine the optimum combination of pump horsepower and DRA injection units that would achieve the desired capacity of 70 300 m^3/d, EPI determined that it would have to perform modifications at all 22 pump units on the Canadian pipeline section. The modifications vary from new pumps, pump replacements or modifications to obtain the desired horsepower. In addition, the hydraulic analysis recommended the addition, re-commissioning or relocation of DRA injection units. The proposed work at each pump station is highlighted in Table 3-4 of Appendix 5-1 of the application.

EPI stated that the hydraulic design assumed that the maximum discharge pressures from each pumping facility would be limited to the maximum discharge pressures currently set by EPI in each section of Line 2. EPI also stated that these discharge pressures are lower than the Line 2 current MOP.

Construction of the Line 2 Modifications would begin in early 2008, for a target in-service date of 30 September 2008.

5.1.2 LSr Pipeline

The LSr Pipeline's design would include approximately 288 km of new pipe with related components and associated facilities. EPI stated that the pipeline would require the construction of new pump units at three existing EPI pump stations located at Cromer, Glenboro and Manitou. These new pumping facilities would be located separately from the existing EPI pumping facilities, but on existing EPI pump station sites. The pipeline would be designed to transport crude oil and would be operated as a LVP. EPI indicated that it would comply with the applicable code requirements for minimum depth of cover.

EPI intends to start construction of the LSr Pipeline in the beginning of August 2008, although pump station work would commence earlier. The planned in-service date is 31 December 2008.

Line Pipe Design

In its application, EPI indicated that the pipe for the LSr Pipeline would be Grade 483 (X70) steel and would be manufactured using either a longitudinal or helical seam welding process in compliance with CSA Z245.1 or API 5L pipe manufacturing standards. As indicated in Table 2-4 of Appendix 5-1 of the application, the pipe would be 508 mm OD and would have a wall thickness of 6.4 and 6.7 mm except at uncased railway crossings where it would be 10.2 mm.

EPI filed engineering updates for the LSr Pipeline which revised Section 2.3.2 and Table 2-4 of Appendix 5-1 of the application. In these updates, EPI stated it would install a section of Grade 550 (X80) line pipe with equivalent wall thickness to the proposed Grade 483 (X70) line pipe to refine welding and handling techniques. The revised Table 2-4 shows that the entire pipe would be 6.4 mm thick, except for uncased railway crossings which would be 10.2 mm thick.

EPI stated that the pipeline would contain short lengths of heavy-wall pipe, which are required for crossings of roads and major rivers. The length and wall thicknesses of these additional heavy-wall segments would be determined based on engineering assessments performed during detailed design.

EPI chose not to use 6.7 mm thick pipe for the first 24.2 km downstream of the Cromer station where an MOP of 10 200 kPa was initially applied for. The revised Table 2-4 indicates that the anticipated pressure along the entire length of the LSr Pipeline would now be 9 650 kPa. The revised table also highlights the required pump power needed for all three stations.

Coating

EPI indicated that the primary corrosion control would be provided by a plant-applied fusion bond epoxy coating. At locations where damage to the coating may be encountered during crossings or construction, EPI may apply an additional abrasive resistant coating or use other coatings such as rock shield, sand padding or concrete coating. Consistent with current pipeline design, EPI indicated that a cathodic protection system would be used as a secondary corrosion control measure.

Hydrostatic Pressure Testing

OPR-99 and CSA Z662-07 require that a pipeline designed for LVP service (such as crude oil service) must first undergo a pressure test before being placed into operation. The pressure test serves two purposes. First, the strength component of a pressure test demonstrates pipeline integrity and that the pipeline is able to withstand the anticipated MOP with a minimum safety margin of 1.25. Second, the leak test ensures that the pipeline is not leaking before it is placed in service. Predominately for safety reasons, pressure tests are conducted using a liquid medium such as water (hydrostatic test). EPI plans to hydrostatically test the LSr Pipeline in accordance with OPR-99 and CSA Z662 requirements.

5.2 Integrity

As an existing EPI pipeline, Line 2 is and would continue to be operated pursuant to EPI's standards and programs, which include the IMP (described in section 3.5.2). Additionally, EPI stated that the new LSr Pipeline would be fully implemented into EPI's integrity management activities and that the Capacity Replacement Project would comply with OPR-99 and CSA Z662-07.

5.2.1 Line 2 Operating Pressures

EPI performed a hydraulic analysis for the entire length of Line 2 in order to increase the pipeline's annual capacity to 70 300 m^3/d by optimizing the design of pump horsepower with DRA injection units. The hydraulic analysis assumed that the maximum discharge pressures downstream of each pumping facility would be limited to current maximum discharge pressures, which are lower than the current MOP of Line 2.

5.2.2 LSr Pipe Thickness and Depth of Cover

MPLA/SAPL expressed safety and integrity concerns regarding the proposed depth of cover of 0.9 m in soil, the class location factor of 1 and the wall thickness of 6.4 mm for the LSr Pipeline. MPLA/SAPL proposed that the LSr pipe be installed at a depth of 1.5 m instead of 0.9 m and that EPI use thicker wall pipe according to Class 3 location requirements.

EPI indicated that safe pipe surface load depends on depth of cover and other factors which include, but are not limited to, pipe wall thickness. EPI agreed that an increase in depth of cover from 0.9 m to 1.5 m would generally enable an increase in surface load allowable over pipe.

EPI submitted that, for pipelines in LVP service such as the LSr Pipeline, CSA Z662 design requirements for depth of cover and wall thickness are not dependent upon class location factors. Accordingly, CSA Z662 specifies a minimum depth of cover of 0.6 m for LVP pipelines regardless of urban or rural areas. EPI noted that the total coverage over the new LSr pipe would typically vary from 1.05 m to 1.1 m by taking into account the topsoil added over construction grade at 0.9 m. Further, the Applicants filed a document entitled *Enbridge Southern Lights Acceptable Agricultural Equipment Crossings (at 0.9 m cover)*, which suggests that farm vehicles and equipment would not be restricted from safely traversing the LSr pipe, and a substantial safety margin would even allow for some pipe depths shallower than 0.9 m.

Monitoring and Mitigation Measures

EPI explained that in addition to meeting CSA Z662 requirements, its pipelines are incorporated into a periodic monitoring program which includes depth of cover surveys and ongoing integrity digs. EPI's existing IMP and specific corrosion management practices include the use of high-performance coatings, a cathodic protection system and periodic ILI and repairs. As well, EPI listed measures to minimize unauthorized contacts with pipe which have been successful in preventing third party damage failures over the past ten years along Line 2, Line 13 and the proposed LSr route.

EPI described its mitigation measures when depth of cover becomes shallower than 0.6 m as follows:

- additional signage and management where public safety is not compromised and where warranted by land use, generally for a short term period;
- mechanical protection in shallow areas such as ditches;
- additional cover in areas that are not subject to erosion; and
- lowering the pipeline in agricultural areas that are subject to erosion.

On 19 October 2007, MPLA/SAPL advised that they had resolved their issues related to the application after reaching a settlement with EPI. The Settlement Agreement lists several commitments made amongst parties to address matters such as depth of cover surveying, coverage over pipe and agricultural equipment and cultivation activities not permitted without further investigation by EPI.

Views of the Board

The Board finds that the Capacity Replacement Project will comply with OPR-99 and CSA Z662-07 and will follow the IMP implemented by EPI.

The increased crude oil capacity on Line 2 will be achieved without an MOP increase through the effective use of pump upgrades and the addition or recommissioning of DRA injection units. The Board has no integrity-related concerns with the Line 2 Modifications, as the amplitude of operating pressures will not be significantly altered to impact the integrity of Line 2.

It is the Board's view that the LSr Pipeline will be constructed using proven modern or advanced manufacturing, welding and coating practices that will prevent, minimize or delay the occurrence of integrity-related defects. The Board is of the view that it is appropriate that, prior to being placed into crude oil service, the LSr Pipeline be hydrostatically pressure tested in accordance with CSA Z662-07 to validate EPI's design and construction practices as well as the pipeline's initial integrity. The Board finds that the proposed depth of cover and pipe wall thickness are adequate for the intended service and location of the LSr Pipeline. EPI shall ensure ongoing pipeline integrity and public safety through its IMP; compliance with the applicable standards or regulations will be verified by the Board during inspections or audits. In particular, EPI shall apply and improve, as necessary, its third party damage prevention measures and the regular depth of cover monitoring and mitigation practices described throughout the Applicants' submissions.

5.3 Construction and Operation

5.3.1 Joining Programs

EPI has not completed the development of joining programs for the Capacity Replacement Project. However, the evidence provided by EPI forms a framework for the ongoing development of these programs.

Regarding the LSr Pipeline, EPI indicated that joining programs would be developed in accordance with OPR-99 and CSA Z662 requirements. In the application, EPI made high-level statements regarding pipeline joining. EPI indicated that field girth welding of line pipe for the LSr Pipeline would be by manual shielded metal arc welding (SMAW) or mechanized gas metal arc welding. Tie-in welding for the LSr Pipeline would involve a combination of manual SMAW and semi-automatic flux core arc welding. All field girth welds would be non-destructively inspected using ultrasonic or radiographic inspection methods.

The Line 2 Modifications may require welding on liquid-filled piping. If welding occurs on liquid-filled pipeline or components with a CE greater than 0.50 percent, which is a possibility, EPI would be required to submit the welding specifications and procedures and the results of the procedure qualification tests to the Board for approval pursuant to subsection 38(3) of the OPR-99.

Views of the Board

With respect to the LSr Pipeline, the Board currently considers the use of Grade 550 pipe and some of the associated joining and NDE techniques associated with this grade of pipe as either new, unproven or requiring particular attention. With regard to Line 2, the Board would require a joining program for welding on materials with a CE greater than 0.50 percent, to verify that appropriate welding procedures are employed in order to prevent cold cracking in steels with high CEs. The Board notes that the potential for delayed hydrogen cracking increases proportionally with the CE of the base materials to be joined. This effect may be compounded by the quenching effects of flowing liquids within the pipeline on weld deposits placed on the surface of in-service pipelines.

In light of the condition of Line 2 and the proposed use of Grade 550 pipe for the LSr Pipeline, the Board would require EPI to file joining programs for review to ensure that appropriate welding procedures and NDE techniques and processes will be employed. EPI shall demonstrate, through the development of the joining program documentation, the capability of the NDE processes and of EPI's technicians to consistently and accurately identify and size flaws anticipated by the welding processes.

5.3.2 Leave to Open for Line 2 Modifications Facilities and LSr Station Facilities

EPI requested that the Board, upon the issuance of a Certificate for the LSr Pipeline, grant an order pursuant to section 58 of the NEB Act exempting the LSr Station Facilities from subsection 30 (1)(b) and section 47 of the NEB Act.

EPI also requested that the Board grant an order pursuant to section 58 of the NEB Act authorizing EPI to construct and operate the Line 2 Modifications facilities and exempt these facilities from the provisions of sections 30 and 47 of the NEB Act. Such an order would relieve EPI from having to obtain a Leave to Open order for the Line 2 Modifications facilities.

Views of the Board

The orders sought in respect of the LSr Station Facilities and Line 2 Modifications would relieve EPI from having to seek Leave to Open orders in respect of these facilities.

EPI will design the LSr Station Facilities and the Line 2 Modifications in accordance with OPR-99 and CSA Z662-07. During construction, Board inspectors will verify EPI's implementation of its designs and the quality control provided. Through its construction oversight, the Board would verify that the foregoing facilities are safe and that construction and commissioning will be monitored to ensure that standards are met.

Therefore, pursuant to section 58 of the Act, the Board would exempt the LSr Station Facilities and Line 2 Modifications from the requirement to seek Leave to Open orders.

5.4 Socio-Economic Matters

The Board requires companies to identify and consider the impacts a project may have on socio-economic conditions including the mitigation of negative impacts and enhancement of project benefits.

5.4.1 Land Use

In its application, EPI stated that most of the land traversed by the LSr Pipeline would be privately owned agricultural lands. The application also indicates that the Town of Morden, Manitoba and a local golf course may be affected by the LSr Pipeline. The issues of depth of cover and potential disruption to the Town of Morden and the golf course are set out below.

Depth of Cover

The application contained concerns raised by landowners about their safety when operating equipment and vehicles over pipelines. These points were also raised by intervenors in these proceedings.

EPI submitted that it will install the proposed pipeline at a depth of 0.9 m, which exceeds the CSA standards. EPI submitted that this depth of cover provides sufficient protection and allows equipment typically used in agricultural activities to safely cross the pipeline.

In its evidence, EPI acknowledged that its integrity dig program has revealed locations along existing pipelines that would be adjacent to the proposed LSr Pipeline where the depth of cover was shallower than 0.6 m. In these cases, EPI submits that mitigation measures, appropriate to the particular location, were applied including: additional signage and management, additional cover, lowering the pipeline and mechanical protection.

The Settlement Agreement between EPI and the MPLA/SAPL, filed on the record of these proceedings, includes a section dealing with depth of cover. The Agreement states that EPI will undertake a depth of cover survey of its existing lines that are within or contiguous with the LSr Pipeline and, where the depth is found to be less than 0.6 m and the reduced depth is a safety concern or causes interference with cultivation, EPI will restore the depth to 0.6, implement other mitigative measures or compensate the landowner for resulting crop loss or damages.

Disruptions to Town of Morden and Golf Course

The application indicated that there may be disruption caused to the Town of Morden and the local golf course during construction.

EPI has confirmed that it will develop urban construction plans for the Town of Morden and the golf course and that those plans will be developed in consultation with those affected. EPI has further committed to including those urban construction plans in its Environmental Protection Plan (EPP).

Views of the Board

The Board notes that EPI indicated that there are approximately 365 private landowners and approximately 277 tenants whose land will be traversed in Manitoba. MPLA represents 178 Manitoba landowners; it is not clear whether all own land along the proposed LSr Pipeline route.

Safety of NEB-regulated facilities is a priority for the Board. The concern about the safety of the proposed LSr Pipeline that was expressed by MPLA members may be satisfactorily addressed by the Settlement Agreement they have negotiated with EPI. However, the Board is mindful that landowners who are not members of MPLA may also have concerns.

In considering these possible outstanding concerns, the Board notes that EPI would construct the LSr Pipeline at a depth of 0.9 m, which exceeds CSA standards. In addition, the Board would require EPI to implement a depth of cover monitoring program. In the Board's view, safety concerns related to depth of cover would be adequately addressed through the implementation of these measures.

With respect to the disruptions to the Town of Morden, and the local golf course that may be caused by construction of the LSr Pipeline, the Board is of the view that the development of urban construction plans in consultation with those affected will adequately address the issue.

5.4.2 Emergency Services and Local Accommodation

The application indicated that police officials and municipal representatives expressed concerns about the potential strain on local communities that could be caused by an influx of construction workers. The police indicated that the amount of pressure would depend on the behaviour of the workers. Municipal representatives noted that the strain on local accommodations would depend on the planning and timing of construction and the associated accommodation.

EPI committed to dealing with these concerns through the development and implementation of a workforce accommodation plan and a written code of conduct. Both of these documents would be attached to the project EPP that will be submitted to the Board for approval prior to commencement of construction.

Views of the Board

The Board recognizes the strain that an influx of hundreds of construction workers can have on local communities. In this case, the Board finds that the measures planned by EPI would address the concerns raised by local police and municipal representatives. In particular, the development and implementation of a workforce accommodation plan and a code of conduct would address the concerns about worker behaviour and pressure on accommodation. The Board notes EPI's commitment to attach these two documents to its EPP, which would be submitted to the Board for approval prior to the commencement of construction. The Board would also require that all of EPI's commitments be posted on the company's web site and be updated at least quarterly.

The Board expects that EPI would obtain all relevant permits and approvals from municipal, provincial and federal agencies for undertaking construction of the LSr Pipeline.

5.5 Part IV Matters

5.5.1 Tolling Methodology

EPI requested approval, under Part IV of the NEB Act, of the tolling methodology to apply to the Line 2 Modifications and the LSr Pipeline prior to the of Line 13. The Capacity Replacement Project is expected to provide additional Mainline capacity by the end of 2008, which is earlier than the closing date for the transfer of Line 13. The closing date is projected to be 31 December 2009 but no later than 1 July 2010. The period between in-service date for the Capacity

Replacement Project and the closing date for the Line 13 Transfer is known as the 'Interim Period'.

EPI proposed that because its Mainline shippers will have access to both Line 13 and the replacement capacity during the Interim Period, the capital and operating costs associated with the Capacity Replacement Project will be borne by its Mainline shippers during that time. EPI undertook to file an application pursuant to Part IV of the NEB Act to recover these costs during the Interim Period, prior to the facilities going into service. CAPP supported this position.

EPI stated that the proposed transfer price of Line 13 ensures that there is no net change to the Canadian Mainline rate base and capital structure. EPI further stated that there would be efficiency gains for the Mainline shippers through the transfer of Line 13 and EPI's role in the ongoing operations of the diluent line and through the incremental revenue from the alternative use of Line 2 breakout tankage at Cromer.

Views of the Board

The Board notes that the proposed tolling methodology was not opposed by any party. CAPP has agreed to EPI's proposal that the capital and operating costs associated with the Capacity Replacement Project will be borne by the Mainline shippers during the Interim Period. The Board is of the view that, because EPI's shippers will have access to both Line 13 and the Capacity Replacement facilities during the Interim Period, it is appropriate that these shippers pay for this benefit. Therefore, the Board is of the view that the applied for tolling methodology for the Line 2 Modifications and the LSr Pipeline project prior to the Line 13 Transfer would result in just and reasonable tolls.

Prior to the facilities going into service, the Board would require EPI to file an application pursuant to Part IV of the NEB Act to recover these costs during the Interim Period.

Chapter 6

Conclusions

6.1 Benefits and Burdens of the Southern Lights Project

The Project involves a number of interrelated applications, including facilities applications made pursuant to Part III of the Act, applications related to tolls under Part IV of the NEB Act and a transfer application pursuant to section 74 of the NEB Act. None of these applications stand alone, they are all required for the Project. Therefore, while the Board has considered the individual requirements for each application it has also considered whether the Project would be in the public interest.

The factors to be considered and the criteria to be applied in coming to a decision on the public interest, or the present and future public convenience and necessity, may vary as a result of many things, including the application, the location, the commodity/ies involved, the various segments of the public affected by the decision, societal values at the time, and the purpose of the applicable section(s) of the NEB Act. The Board must, after carefully weighing all of the evidence in the proceedings, exercise its discretion in balancing the interests of a diverse public.

Overall the Southern Lights Project generates a broad array of benefits and burdens.

Benefits

In terms of benefits, the Board finds that the Project is a cost-effective solution for diluent transportation through an innovative combination of existing infrastructure and new build. The forecasted growth in heavy oil sand bitumen significantly exceeds the currently available condensate supply required to dilute raw production. Negotiations with potential shippers and an open season resulted in the Applicants obtaining sufficient commitments to backstop the capital and operating costs of the Project under long-term contracts. The Project will provide oil sands producers with access to an abundant and low cost diluent supply, which the Applicants maintained is required in order to realize the value of oil sands deposits for the benefit of industry and, ultimately, consumers. According to the Applicants, the Project is also expected to provide a market outlet for refiners recovering incremental quantities of light hydrocarbons in bitumen blends. Therefore, the Project has the potential to provide an efficient recycle solution.

The direct and indirect benefits of the construction phase of the Project are estimated to be Cdn$332.3 million (in 2006 dollars), with the vast majority of the capital outlay (95 percent or $247.5 million) expected to be spent in Canada. The economic effects are expected to be an increase of $133 million in gross domestic product and employment of 1 794 person years. During the construction phase, a total of $33.9 million in taxes would accrue to federal, provincial and municipal governments.

Those shippers that have entered into long-term TSAs receive benefits in the form of competitive negotiated tolls, price certainty and unapportioned access to the pipeline capacity. The Project

also benefits those shippers that are not prepared to enter into long-term agreements. The Applicants have stated that sufficient capacity will be retained to provide uncommitted shippers with opportunities to transport diluent to Edmonton.

Although the Project involves the removal of Line 13 from crude oil service, it is expected that EPI's Mainline shippers will benefit from the Project in a number of ways given the planned Line 2 Modifications and LSr Pipeline. As a result of the Project, there will be a 7 500 m^3/day (47 000 bbl/d) expansion of the annual capacity of the Mainline light crude system as measured ex-Cromer as well as increased annual capacity for increasing receipt volumes at Cromer. A short-term Mainline annual capacity increase of 34 800 m^3/day (219 000 bbl/d) will occur as a result of the operation of Line 2 and the LSr Pipeline prior to the reversal of Line 13. Furthermore, there will be improved quality due to segregation of Cromer light sour crude volumes from Line 2 and elimination of Line 2 breakout at Cromer. It is also expected that there will be decreased transit time due to higher pipe velocities and the elimination of Cromer breakout. There will also be additional volumes on the Mainline due to additional diluent supply enabling Canadian heavy crude barrels to be transported. Another identified benefit for the Mainline shippers is an expected improvement in operating efficiencies with ESL sharing operating costs, resulting in an anticipated Mainline toll reduction of approximately $0.02/bbl for all shippers.

Burdens

Most of the burdens associated with the Project are local in scope as is often the case for linear fixed facilities. A number of burdens were identified in the ESR (see Appendix V) to these Reasons. Many of these burdens can be mitigated and the Board assessed and weighed the likely success of potential mitigative options in reaching its determination, under the CEA Act, that the Project is not likely to have significant adverse environmental effects. Nevertheless, some impacts or burdens remain, and they have been considered in the Board's determination under Part III of the NEB Act.

Burdens associated with the Project include direct disruption to land and the activities on that land. The Board recognizes that such disruption could cause a temporary loss of landowners' use and enjoyment of their properties, particularly for those who own or occupy the properties to be crossed by the pipeline RoW. However, the Board finds that, by using existing infrastructure, installing facilities on existing EPI sites and routing the LSR Pipeline to the extent possible along existing RoWs, those disruptions will be minimized. The Board also finds that commitments made by the Applicants to cooperatively work with affected landowners by, for example, establishing Joint Committees and carefully tracking landowner complaints, will further minimize any negative impacts of pipeline construction and operation.

Without appropriate mitigation measures, there is the potential that construction of the LSr Pipeline could disrupt the Town of Morden, and the local golf course, impact the availability of local accommodation and affect agricultural operations. The Board finds that the mitigation measures proposed by the Applicants will minimize the potential for such adverse effects. With respect to disruptions to the Town of Morden and the local golf course that may be caused by construction of the LSr Pipeline, the Board is of the view that the development of urban construction plans in consultation with those affected will adequately address the issue. The

Board also finds that the measures planned by EPI will address the concerns raised by local police and municipal representatives. In particular, the development and implementation of a workforce accommodation plan and a code of conduct will address the concerns about worker behaviour and pressure on accommodation.

The Board is also aware of potential concerns regarding pipeline safety. Safety of NEB-regulated facilities is a priority for the Board. The Board notes that EPI will construct the LSr Pipeline at a depth of 0.9 m, which exceeds CSA standards. In addition, the Board will require EPI to implement a depth of cover monitoring program for the LSr Pipeline. Furthermore, with respect to Line 13, the Board will require ESL to submit an EA at least nine months prior to the reversal of Line 13 in order to confirm ongoing pipeline integrity. Should the Board determine that the EA does not adequately address its concerns, ESL would be required to hydrotest portions of Line 13. In addition, the Board will also require ESL to conduct an emergency response exercise where Line 13 crosses the South Saskatchewan River, and the Board intends to meet with ESL to discuss ESL's emergency response program as it relates to the South Saskatchewan River crossing when the pipeline is operational. With the implementation of these measures, the Board is of the view that any outstanding safety issues of this proposed facility would be addressed.

Several parties raised the possibility of a potential burden on Aboriginal people and their corresponding interests. The Board is of the view that ongoing discussions between the Applicants and Aboriginal groups, coupled with a Heritage Resource Discovery Contingency Plan, will minimize potential impacts on traditional use sites, if encountered. Furthermore, the proposed Project would involve a relatively brief construction phase, with the vast majority of the facilities being buried. As almost all the lands required for the Project have previously been disturbed, are generally privately owned, are used primarily for agricultural purposes and are adjacent to an existing pipeline RoW, the Board is of the view that potential Project impacts on Aboriginal interests will be appropriately mitigated. The Board is therefore of the view that impacts on Aboriginal interests are likely to be minimal.

Balancing of Benefits and Burdens

Having weighed the totality of benefits against the totality of burdens, the Board has determined that the benefits outweigh the burdens and that the Project is in the public interest.

Chapter 7

Disposition

The foregoing constitutes the Board's Reasons for Decision in respect of the applications considered in the OH-3-2007 proceeding.

With respect to the Diluent Pipeline Project, the Board grants EPI leave pursuant to subsection 74(1)(a) of the NEB Act to sell Line 13 in accordance with the terms and conditions set out in the Transfer Agreement. Correspondingly, the Board also grants ESL leave pursuant to subsection 74(1)(b) of the NEB Act to purchase Line 13 in accordance with the terms and conditions set out in the Transfer Agreement. The Board approves the proposed methodology to determine the transfer price and, by virtue of subsection 129(1.1) of the NEB Act, exempts the Applicants from subsection 15(4) of the OPUAR. The Board further approves the reduction of the EPI Mainline system rate base by the Transfer Price, such that the net book values of the LSr Pipeline and Line 2 Modifications are effectively offset in the Mainline system rate base as of the closing date, rather than transferring the amount of the gain or loss from Account 31 (Accumulated Depreciation – Transportation Plant) or Account 32 (Accumulated Amortization – Transportation Plant) to Account 402 (Extraordinary Income) or to Account 422 (Extraordinary Income Deductions) as applicable and as prescribed by section 40(2) of the OPUAR.

The Board grants ESL an order pursuant to section 58 of the NEB Act that has the effect of authorizing the construction and operation of the Line 13 Reversal facilities and exempting these facilities from the provisions of sections 30, 21 and 47 of the NEB Act.

The Board expects the Applicants to apply in due course for any necessary amendments to the pre-existing certificates governing the operation of Line 13 arising from the Line 13 Reversal and Line 13 Transfer.

With respect to the Capacity Replacement Project, the Board approves EPI's application pursuant to section 52 of the NEB Act and will recommend to the Governor in Council that a Certificate be issued, subject to certain conditions (see Appendix III). Further, the Board would grant EPI an order pursuant to section 58 of the NEB Act exempting the LSr Station Facilities from the provisions of subsections 30(1)(b), 31(c), 31(d) and section 47 of the NEB Act concurrently with the issuance of the Certificate for the LSr Pipeline. Further, the Board grants EPI an order pursuant to section 58 of the NEB Act which in effect authorizes EPI to construct and operate the Line 2 Modifications facilities and exempts those facilities from the provisions of sections 30, 31 and 47 of the NEB Act. Finally, the Board approves the tolling methodology to apply to the Line 2 Modifications and the LSr Pipeline prior to the transfer of Line 13 from EPI to ESL.

Given the interrelated nature of the applications, the attached orders will not come into force for the purposes of commencing the construction of any of the applied-for facilities until a Certificate has been issued for the LSr Pipeline. Similarly, leave to transfer Line 13 is subject to the issuance of the applied-for Certificate.

S. Crowfoot
Presiding Member

S. Leggett
Member

K. Batemen
Member

Calgary, Alberta
February 2008

Appendix I

List of Issues - OH-3-2007

The Board has identified but does not limit itself to the following issues for discussion in the proceeding:

1. The need for the proposed projects.

2. The economic feasibility of the proposed projects.

3. The appropriateness of the proposed tolling methodology, the method of toll and tariff regulation and the price at which the Line 13 facilities should be transferred

4. The potential commercial impacts of the proposed projects.

5. The reasonableness of the open season process and the appropriateness of contracted capacity for transportation on the diluent pipeline.

6. The appropriateness of the general route of the LSr Pipeline.

7. The suitability of the design, construction and operation of the proposed new, modified and converted facilities.

8. The potential environmental and socio-economic effects of the proposed new, modified and converted facilities, including those factors outlined in subsection 16(1)[1] of the CEAA:

9. The terms and conditions to be included in any approval the Board may issue.

10. Impacts of the Project on Aboriginal People.

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[1] **16.** (1) Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

(a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;

(b) the significance of the effects referred to in paragraph (a);

(c) comments from the public that are received in accordance with this Act and the regulations;

(d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and

(e) any other matter relevant to the screening, comprehensive study, mediation or assessment by a review panel, such as the need for the project and alternatives to the project, that the responsible authority or, except in the case of a screening, the Minister after consulting with the responsible authority, may require to be considered.

Appendix II

NEB Rulings on Motions and Directions

Manitoba Pipeline Landowners Association (MPLA) and Saskatchewan Association of Pipeline Landowners (SAPL) 6 July 2007 Notice of Motion
Ruling Number 1dataed 27 July 2007

Manitoba Pipeline Landowners Association (MPLA) and Saskatchewan Association of Pipeline Landowners (SAPL) 12 July 2007 Notice of Motion #2
Ruling Number 2 dated 9 August 2007

Direction Regarding Standing Buffalo Dakota First Nation (SBDFN) Notice of Motion dated 26 October 2007

National Energy Board

Office national de l'énergie

To: All Parties to OH-3-2007

Hearing Order OH-3-2007
Southern Lights Pipeline Project
Manitoba Pipeline Landowners Association (MPLA) and Saskatchewan Association of Pipeline Landowners (SAPL) 6 July 2007 Notice of Motion
Ruling Number 1

Background

The National Energy Board received a number of related applications for the Southern Lights Project dated 9 March 2007 from Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL) and Enbridge Pipelines Inc. (EPI) (collectively, the Applicants). The Southern Lights Project consists of a Diluent Pipeline Project, which involves the transfer of the Canadian portion of Line 13 from EPI to ESL and the removal of Line 13 from southbound crude oil service and the reversal of Line 13 to transport diluent from the Canada/U.S. border near Gretna, Manitoba to Edmonton. The proposed Capacity Replacement Project involves the construction of a 286 km light sour crude oil pipeline (LSr Pipeline) from Cromer, Manitoba to the Canada/U.S. border near Gretna and several Line 2 modifications and is intended to offset the reduction of southbound crude oil capacity on the EPI system resulting from the transfer of Line 13 to northbound diluent service.

On 17 April 2007, the Board issued Hearing Order OH-3-2007 in relation to the Southern Lights Project. The Hearing Order outlined the schedule for the Southern Lights proceeding, which included the commencement of the oral Hearing on 13 August 2007. Since the issuance of the Hearing Order, in accordance with the schedule outlined in the Hearing Order, the Applicants have filed additional evidence and responded to a number of information requests. As well, a number of intervenors have filed evidence and information requests have been issued in relation to that evidence.

On 30 May 2007, EPI applied to the Board to construct the Alberta Clipper Expansion Project, a new oil pipeline from Hardisty, Alberta to the Canada/U.S. border near Gretna, Manitoba, and to charge tolls in accordance with a proposed tolling methodology.

On 28 June 2007, the Board issued Hearing Order OH-4-2007 in relation to the Alberta Clipper Expansion Project and decided to convene an oral public hearing beginning 5 November 2007. Applications to intervene in the proceeding are due 30 July 2007.

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MPLA/SAPL 6 July 2007 Motion

The MPLA SAPL are intervenors in the OH-3-2007 proceeding. On 6 July 2007, the MPLA SAPL filed a Motion for orders:

(a) Adjourning the hearing of the applications by Enbridge Southern Lights GP Inc. (on behalf of Enbridge Pipelines Inc.) respecting the Line 13 Transfer, Line 13 Reversal and the Capacity Replacement Project, and consolidating said hearing with the hearing of the application by Enbridge Pipelines Inc. for the Alberta Clipper Expansion Project to commence 5 November 2007;

(b) In the alternative, adjourning the commencement of the hearing of the Southern Lights Project application to 5 November 2007, said hearing to be held at the same time and in the same location as the hearing of the Alberta Clipper Expansion Project Application; or,

(c) In the further alternative, adjourning the commencement of the hearing of the Southern Lights Project application to a date no earlier than 29 October 2007.

The MPLA SAPL stated that the Motion to consolidate the proceedings was supported by the interrelationship between the Southern Lights and Alberta Clipper Expansion Projects. In this regard, the MPLA SAPL noted that the Southern Lights LSr Pipeline and the Alberta Clipper Pipeline would be constructed in the same easement at roughly the same time which will require additional workspace. The MPLA SAPL also stated that a joint public consultation program was carried out for both Projects in part for the convenience of the landowners, that Enbridge proposes a form of easement agreement that provides for the installation of "one or more pipelines", and that reclamation is to be delayed until after the installation of the second pipeline. The MPLA SAPL also referenced the fact that it was of the view that the cumulative effects assessments related to the two Projects is deficient.

The MPLA SAPL stated that, in light of the interrelationship between the proposed Southern Lights LSr and Alberta Clipper pipelines and the MPLA SAPL's concern with respect to mitigation strategies to deal with the cumulative impacts of the two Projects, it is vitally important that MPLA SAPL be able to participate in both proceedings. The MPLA SAPL noted the expense and time associated with participating in the established regulatory processes and stated that the landowners would face undue hardship if they must participate at their own expense and on their own time in two separate oral hearings before the Board. The MPLA SAPL stated that Manitoba landowner members of the MPLA face the prospect of the two new Enbridge pipelines going through their farms while the landowner members of the SAPL are concerned that the determination of issues important to agricultural landowners in the Southern Lights Hearing will pre-determine the issues to be addressed in the Alberta Clipper Hearing.

The MPLA SAPL stated that there are cogent and compelling reasons to consolidate the hearings and that proceeding by separate oral hearings would result in a serious waste of time and resources by all parties, with there being a significant amount of duplication of work. The MPLA SAPL claimed that the Board could not properly adjudicate on the Southern Lights Application without fettering itself with regard to the other Application and that a "comprehensive approach" to the applications would be more advantageous than a staged one.

The MPLA SAPL also stated that the current start date of the Southern Lights oral Hearing is likely to coincide with the fall harvest in Manitoba and Saskatchewan and, therefore, the MPLA SAPL would not have an opportunity to participate in the process without great personal sacrifice.

The Board received a number of submissions with respect to the Motion. The Board notes that the Alberta Federation of Labour filed submissions with respect to the Motion a number of days after the deadline for its submissions, after the parties opposed to the Alberta Federation of Labour's position had submitted their comments. Given that the Alberta Federation of Labour provided no explanation as to why its submission was late and the prejudice that other parties would face as a result of not having an opportunity to reply to the Alberta Federation of Labour's comments, the Board did not consider the Alberta Federation of Labour's when making its determination on the Motion.

Parties in Favour of the Motion

No other parties submitted comments in support of the MPLA SAPL's Motion within the deadline for comments established by the Board.

Parties Opposing the Motion

A number of submissions were filed in opposition to the Motion within the deadline for comments established by the Board. Devon Canada Corporation, Suncor Energy Marketing Inc., BP Canada Energy Company Limited, Baytex Energy Ltd., Statoil North America, Inc., and CAPP expressed concern that a delay in the regulatory proceedings would result in a delay in the availability of much needed capacity for heavy oil, which was not in the public interest. CAPP specifically claimed that pushing the Line 2 modifications and the LSr Pipeline into the same timeframe as the Alberta Clipper Expansion Project would push completion from the end of 2008 into 2010 and would add to the risk of cost overruns for both Projects. Baytex Energy Ltd. and Statoil North America, Inc. specifically expressed concern about how a delay could impact the availability of diluent.

CAPP further submitted that the Southern Lights Project and Alberta Clipper Expansion Project are different projects with different applicants. CAPP claimed that the Applicants have packaged all components of that Project into one entirely proper application and the Applicants were entitled to have the application heard in a timely manner. Devon claimed that, once a process for project review has been established, there is an expectation that the timing associated with such a

process will be maintained. BP Canada Energy Company Limited similarly argued that the Southern Lights and Alberta Clipper Expansion Projects are different projects with different applicants, parties, routes, products and critical paths.

The Applicants argued that the facts stated in the Motion were selective and incomplete. Additional facts identified by the Applicant included the fact that the Southern Lights Project involved a number of applications, with the Applications respecting the Line 13 transfer and reversal and the Application respecting the Line 2 modifications not involving any new pipeline construction or land acquisition and the LSr Pipeline not involving any new pipeline construction or land acquisition in Alberta or Saskatchewan. The Applicants noted that the schedule for the Project is based upon receiving regulatory approval of the Project Applications by 31 December 2007. The Applicants stated that the Southern Lights Project was developed to respond to industry demand for additional diluent supply in Western Canada while the Alberta Clipper Expansion Project was developed to respond to industry demand to increase the pipeline take away capacity from Western Canada to accommodate expected oil sands production and would be integrated to form part of the existing Enbridge Mainline system. The Applicants also stated the different targeted construction completion dates for the two Projects. The Applicants maintained that what was evident from the additional facts was that the Southern Lights Project and the Alberta Clipper Expansion Project are separate projects, have separate purposes, are subject to different commercial agreements with different parties and have different schedules.

With respect to the claims in the MPLA SAPL Motion that the Southern Lights Application failed to properly assess and address and or provide adequate mitigation strategies to deal with cumulative impacts of the proposed Project as well as Enbridge's existing pipelines, the Applicants stated that these allegations would be addressed at the OH-3-2007 Hearing and that the allegations did not provide grounds to adjourn the hearing.

With respect to the request to consolidate the two hearings and the argument that MPLA cannot afford the time and money required to take part in two oral Hearings, the Applicants noted that of those MPLA landowners that had filed evidence, it only anticipated asking questions of one landowner and that the Applicants were prepared to work with the Board and intervenors to ensure that his appearance at the hearing is scheduled to minimize his time and expense. With respect to the SAPL concern that consolidation is required due to a concern that the determination of issues important to agricultural landowners in Southern Lights will pre-determine the issues to be addressed in the Alberta Clipper Expansion Project hearing, the Applicants noted that the Southern Lights Project involved no new pipeline construction or land acquisition in Saskatchewan and the fact that it is trite law that no panel of the Board is bound by the decision of another panel.

The Applicants noted that the Board has acknowledged that there is often some overlap between hearings given the nature of the industry and that the Board would consider hearing separate applications together if proceeding by way of separate applications would result in an abuse of process or a serious waste of time and resources by the Board and all parties. The Applicants acknowledged that the Southern Lights Project and the Alberta Clipper Expansion Project may

give rise to some overlap of issues for some landowners in Manitoba; however, the Applicants claimed that proceeding with the scheduled OH-3-2007 Hearing would not result in an abuse of process or a serious waste of time and resources. The Applicants stated that the Board has a legal obligation to hear an application so long as it is complete and is not being brought forward in a piecemeal fashion for inappropriate purposes. The Applicants submitted that the Southern Lights Project Applications are complete and that the Board therefore has a legal obligation to hear them without delay.

The Applicants concluded by noting that the Board must make its decision in the public interest, which includes the interests of all Canadians, including the interests of the MPLA SAPL, the Applicants, the shippers, and Western Canadian oil producers. According to the Applicants, the Canadian public interest would not be served by delays in the Southern Lights Project approval process and the proposed in-service dates of the Project facilities.

MPLA SAPL Reply

The MPLA SAPL submitted that comments regarding the adjournments potentially resulting in the delay of the in-service date of the Southern Lights Project should be disregarded because it assumes that the Board will approve the Project. The MPLA SAPL noted that no parties had filed evidence demonstrating that an adjournment of the commencement of the Hearing to the dates proposed would prevent a determination by the Board of the Applicants' Applications on or before 31 December 2007. The MPLA SAPL noted that several of CAPP's assertions, including the risk of cost over runs for both Projects if Southern Lights is pushed into the same timeframe as the Alberta Clipper Expansion Project, were not supported by any evidence and should be disregarded.

The MPLA SAPL submitted that the Board must consider the point of view of directly affected landowners, who will face the installation of two additional pipelines within five metres of each other within a one to two year period. The MPLA SAPL stated that an adjournment of the Southern Lights Hearing is critical to addressing landowner concerns about the Applicants' proposals and is critical to fulfilling its objectives of fostering stakeholder participation and the duty to ensure fairness and natural justice.

With respect to the BP Energy comments, the MPLA SAPL emphasized that BP Canada's interests in the proceeding relate to its ownership of U.S.-based refineries and that the Board should give greater weight to the concerns of directly affected Canadian pipeline landowners as the Board must decide matters according to the Canadian public interest.

MPLA SAPL noted that it was for the Board to determine its own process and that the MPLA SAPL had not requested for the Projects to proceed in lock-step fashion.

The MPLA SAPL further clarified that the transfer of Line 13 from EPI to a different company raises significant landowner concerns and claimed that the fact that no new land will be acquired by the Applicants does not mean that the Line 13 proposal has no impact on landowners.

The MPLA SAPL stated that the relief sought is necessary, in light of the alleged failures by the Applicants to address cumulative impacts adequately, to help ensure that sufficient information regarding the Alberta Clipper Expansion Project is before the Board on the hearing of the Southern Lights Application.

In terms of landowner participation in the Hearing and the Applicants anticipation that they would only have questions for one of the landowners who filed evidence, the MAPL SAPL submitted that landowner participation in the hearing is not limited to the attendance at the oral hearing by only one landowner representative. The MAPL SAPL indicated that their members want to attend the oral hearing to hear firsthand how the Applicants intend to deal with landowner concerns and that they want to be present to hear the evidence of all witnesses, provide information and instructions to counsel and listen to argument. Further, the MAPL SAPL submitted that the Applicants did not make any suggestion about how the Board might facilitate the participation of the landowners. The MAPL SAPL offered to work with the Board on the formulation of a consolidated hearing schedule in November 2007 related specifically to issues of concern to landowners and that this would allow the oral hearing on issues not related to lands and landowners to proceed prior to November 2007.

The MPLA SAPL noted that the SAPL concern about the influence any decision by the Board regarding landowner issues in the Southern Lights hearing may have on a subsequent decision by the Board in the Alberta Clipper Expansion Project proceeding stemmed from the fact that nearly identical Environmental and Socio-Economic Impact Assessments have been filed by the Applicants for both proposed Projects. The MPLA SAPL concluded that not evaluating in the same or consecutive proceedings the similar deficiencies in the Applicants' assessment of the cumulative affects of these Projects to be constructed consecutively in the same easement with common consultation, construction methodology, reclamation, mitigation and compensation constitutes an abuse of process and a serious waste of time.

Views of the Board

Consolidation of Southern Lights Project and Alberta Clipper Proceedings

The Board is of the view that generally applicants are entitled to frame their application as they determine to be appropriate. The Board has a legal obligation to hear an application so long as it is complete and is not being brought forward in a piecemeal fashion for inappropriate purposes. The Board has acknowledged that, given the nature of this industry, there is often some overlap between hearings. Nevertheless, if the Board were of the view that proceeding by way of separate applications would result in an abuse of the process or a serious waste of time and resources by the Board and all parties, it may require them to be heard together.

It is the Board's understanding that the overlap of issues of concern between the Alberta Clipper Expansion Project and the Southern Lights Pipeline Project relates largely to the Application to construct the LSr Pipeline. The parties have not raised concerns with respect to the potential overlap of issues between the Alberta Clipper Expansion Project and the other Southern Lights

Project applications respecting the Line 13 transfer and reversal and the Line 2 modifications. The Board notes, however, that the stated need for the construction of the LSr Pipeline is linked to the Line 13 transfer and reversal.

In the Board's view, it is not apparent that the Applicants for the Southern Lights and Alberta Clipper Expansion are proceeding by way of separate applications in order to avoid jurisdiction or some process, or as a form of project splitting. No party has alleged that that is the case. Rather, the Board is of the view that there is a legitimate delineation between the applications for the Southern Lights Pipeline Project and the Alberta Clipper Expansion Project. While the Applicants and the Board have taken some steps to consolidate the processes related to the two proceedings, through joint public consultation presentations, the two Projects have two separate purposes. Although the MPLA SAPL notes that the Alberta Clipper Pipeline and the Southern Lights LSr will be constructed in the same easement at roughly the same time, the Panel understands that the Projects as a whole have distinct schedules.

With respect to the MPLA SAPL's suggestion that the cumulative impacts of the Projects and the lack of assessment of those impacts warrant consolidating the proceedings, the Board notes that the cumulative impacts of the Alberta Clipper Expansion Project and the Southern Lights Project must be considered in the context of the Southern Lights Project proceeding. The Applicants have assumed a risk of their applications being denied if the cumulative impacts assessment is deficient. In the Board's view, this is not a ground for consolidating the proceedings.

SAPL's concerns that the Board's determination in the Southern Lights proceeding will pre-determine matters in the Alberta Clipper Expansion proceeding are unwarranted. The Board is required to adjudicate the Southern Lights proceeding without fettering itself with regard to the Alberta Clipper Expansion Applications. Natural justice precludes the Board from fettering its discretion and it is well understood that the determinations of one Board panel do not bind the determinations of another Board panel.

Although the Board acknowledges that some of the issues addressed in the Southern Lights Project proceeding and the Alberta Clipper Expansion Project proceedings may be similar, the Board is of the view that such overlap is not uncommon in Board proceedings. Furthermore, the Board is concerned that a consolidation of the proceedings may result in added expense for parties who are only interested in one of the two Projects.

The Board has determined that it is not an abuse of the process nor a serious waste of time and resources by the Board and all parties for the Southern Lights Project and the Alberta Clipper Expansion Project to be considered in separate proceedings. Therefore, the Board has determined that it will not consolidate the two proceedings.

Adjournment Until After Harvest and Holding Concurrent Proceedings

The Board has determined that it is not practical to hold concurrent proceedings. However, the Board acknowledges the value of the effective participation of landowners in its proceedings. NEB Goal 2 states that NEB regulated facilities are to be built and operated in a manner that respects the rights of those affected. Similarly, Goal 4 states that the NEB fulfills its mandate with the benefit of effective public engagement. The Board expects the effective use of hearing time, which is assisted when interested persons with similar concerns join together and present their positions in a single intervention. The Board notes that the MPLA/SAPL is arguably the most active intervenor in the Southern Lights proceeding, having filed substantial evidence and asked a number of information requests.

The Board is mindful that several parties opposed to the Motion have suggested that a delay in obtaining the necessary regulatory authorization will result in delay in much needed additional capacity offered by the Line 2 modifications and the LSr Pipeline coming on line. The Board notes that the Line 2 modifications and the new LSr Pipeline are intended to replace the loss of capacity associated with the proposed Line 13 reversal, which will not occur until a couple of years after the Line 2 modifications and LSr Pipeline are scheduled to be in service.

The Board wishes to maximize the use of the scheduled hearing time while accounting for the scheduling constraints of the MPLA/SAPL. The MPLA/SAPL expressed their strong desire to increase the effectiveness of the hearing process and to avoid waste of time and resources. The Board is prepared to be responsive to the MPLA/SAPL's request with respect to the conflict between the Southern Lights oral Hearing schedule and harvest; however, the Board is also concerned with the effective use of time and resources. Therefore, the Board expects all parties to work together to ensure an efficient and effective use of hearing time.

After considering the submissions of the parties made in accordance with the Board's schedule for comments on the 6 July 2007 Motion, the Board has determined that it will commence the Southern Lights oral Hearing beginning at **8:30 am, Monday, 13 August 2007 in the Hearing Room of the Board's Offices in Calgary, Alberta**. The Board expects that, with the exception of the MPLA/SAPL and the Standing Buffalo Dakota First Nation, during the proceedings held in Calgary, all intervenors will cross-examine the Applicants' witness panels on all issues of interest to them. Once the cross-examination of the Applicants' witness panels by all intervenors other than the Standing Buffalo Dakota First Nation and the MPLA/SAPL is completed, the Board will hear from the witness panel of the Communication Energy and Paperworkers Union of Canada (CEP).

Once the examination of the CEP witness panel is completed, the Board will adjourn the proceeding. The Board will recommence the oral Hearing at **8:30 am Monday, 20 August 2007 in Regina, Saskatchewan in the Novara Ballroom at the Saskatchewan Trade & Convention Centre (Delta Regina Hotel)**. The Standing Buffalo Dakota First Nation will then have an opportunity to cross-examine the Applicants' witness panels. The Board will then hear from the Standing Buffalo Dakota First Nation witness panel.

Following the cross-examination of the Standing Buffalo Dakota First Nation witness panel in Regina, the Board will adjourn its proceedings. The Hearing will recommence at **8:30 am Monday, 29 October 2007 in Brandon, Manitoba at a hearing location to be determined**. Upon recommencing the proceedings, the MPLA/SAPL will cross-examine the Applicants' witness panels and the MPLA/SAPL will seat their witnesses. Upon conclusion of the cross-examination of the MPLA/SAPL witnesses, the Board will hear any rebuttal panels and oral argument. Parties may submit written argument provided it is received by all parties in advance of the commencement of oral argument.

The Board requires the best efforts of all parties to enable an efficient and effective hearing process. In this respect, the Board directs the Standing Buffalo Dakota First Nation and the MPLA/SAPL to identify the issues that they expect to be cross-examining on so that the Applicants will be able to ensure that the appropriate witnesses are made available for cross-examination in Regina, Saskatchewan and Brandon, Manitoba. The Board asks that the Standing Buffalo Dakota First Nation and the MPLA/SAPL file this information by no later than 10 August 2007.

The Board notes that it is open to parties to canvas other parties to determine whether their panels will be cross-examined; if no cross-examination is to occur, parties may adopt their evidence by way of Affidavit.

All other procedural steps should accord with the timeline outlined in Hearing Order OH-3-2007.

Yours truly,

David Young
Acting Secretary

National Energy Board

Office national de l'énergie

File OF-Fac-Oil-E242-2007-01 01
9 August 2007

To: All parties Hearing Order OH-3-2007

Hearing Order OH-3-2007
Southern Lights Pipeline Project
Manitoba Pipeline Landowners Association (MPLA) and Saskatchewan Association of Pipeline Landowners (SAPL) 12 July 2007 Notice of Motion #2
Ruling Number 2

MPLA/SAPL 12 July 2007 Motion

On 12 July 2007, the MPLA/SAPL, intervenors in the OH-3-2007 proceeding, filed a Motion for orders:

(a) Directing the Applicants, Enbridge Southern Lights GP, Enbridge Southern Lights LP (ESL) and Enbridge Pipelines Inc. (EPI) (collectively, the "Applicants") to provide full and adequate responses on or before 30 July 30 to various Information Requests submitted by MPLA and SAPL to the Applicants;

(b) Directing the Applicants to produce to MPLA and SAPL on or before 30 July 2007 or, where they have not yet been prepared, forthwith following their completion, the documents requested in various Information Requests submitted by MPLA and SAPL to the Applicants; and,

(c) Staying the herein proceedings until such time as the Applicants provide the information requested in subparagraphs (a) and (b) above.

On 16 July 2007, the Board issued a letter outlining a process for submitting comments on the Motion. The Applicants filed their comments in opposition to all aspects of the Motion on 20 July 2007. Statoil North America, Inc. and the Canadian Association of Petroleum Producers each filed a submission expressing their opposition to the requested stay. Other than MPLA/SAPL, no parties made submissions in favour of the stay. MPLA/SAPL filed its reply submission on 23 July 2007. The complete text of all comments and submissions can be found on the Board's website under the Southern Lights folder.

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Criteria for Responding to Information Requests

The Board has outlined the criteria for responding to Information Requests in a number of its previous rulings.[1] With respect to the general purpose of information requests and the criteria used to decide when an applicant will be directed to respond to a request, the Board has previously stated:

> The Board process allows for the use of written information requests for a number of reasons. Applications before the Board require the consideration of substantial information, much of it of a detailed and technical nature. Often this information is not conducive to an examination by the oral cross-examination process. Parties are therefore encouraged to obtain and examine such information through the established information request process. This process can be used to obtain the evidence necessary to test and explore the Applicant's case and, in the case of Intervenors, to assist them in preparing their cases.
>
> ...When the parties cannot agree on the appropriateness of the Information Request or the adequacy of a Response, the Board is asked to provide direction.
>
> When considering such a motion, the Board looks at the relevance of the information sought, its significance and the reasonableness of the request. It seeks to balance these factors to ensure that the purposes of the Information Request process are satisfied, while ensuring that an Intervenor does not engage in a "fishing expedition" that could unfairly burden the Applicant.[2]

The criteria of relevance, significance and reasonableness have been applied in a number of proceedings before the Board.[3] In determining whether the information sought to be elicited through the information request process in this proceeding should be provided, the Board is of the view that a similar analysis should be undertaken. The Board will evaluate whether the request is relevant, reasonable and significant and balance these factors to ensure that the above-stated purpose of the information process has been satisfied while ensuring that the Applicants are not unduly burdened by questions that are more in the nature of a "fishing expedition".

After considering the submissions of the parties, the Board has determined the following on each of the various Information Requests (IR).

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[1] Chevron Canada Limited, Chevron Standard Limited and Neste Canada Inc. Application for Priority Destination (MH-2-2005), Board Decision on Motion filed by Tesoro Canada Supply & Distribution Ltd., Ruling Number 2; Emera Brunswick Pipeline Company Ltd. Application for the Brunswick Pipeline (GH-1-2006), Board Decision on Ms. T. Debly's Notice of Motion to require EBPC to respond to Information Requests, Ruling Number 7

[2] Westcoast Energy Inc. (GH-3-94), Transcript Volume 3 (8 February 1995), at 340-342

[3] For example, the Board's Letter Decision dated 5 September 2002 on Westcoast Energy Inc.'s Southern Mainline Expansion Project (GH-1-2002) and the Board's Letter Decision dated 14 February 2003 on Sumas Energy 2, Inc.'s application for an international power line (EH-1-2000).

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Information Requests 1.5 (f), 1.17, 1.21(a), 1.21 (c), 1.48(f), 1.50(b) and 1.51.

The MPLA SAPL have indicated that they were satisfied with the Applicants' responses to Information Requests 1.5(f), 1.17, 1.21(a), 1.21(c), 1.48(f), and 1.51. With respect to IR 1.50(b), the MPLA SAPL acknowledged that, subject to the timely receipt of the Applicants' summary and the MPLA SAPL's review of that information, the Applicants' proposed response would be adequate. Therefore, the Board need not rule with respect to these Information Requests.

Information Requests 1.2 (d) and 1.2 (e)

IR 1.2(d) and 1.2(e) refer to the identification of locations where the proposed routing for the LSr pipeline comes within various distances of residences and farmyards, respectively. The Applicants have supplied the locations for residences and farmyards within 30 metres of the proposed LSR pipeline right-of-way and have indicated that a survey has yet to be done to determine the precise distances of separation. The MPLA SAPL have indicated that, if the requested information is presently available, they maintain their request for a full and adequate response.

The Board understands the Applicants' response as indicating that the requested information is not presently available as a survey has not been performed. In any event, the Board is of the view that the information requested would not be of sufficient significance or probative value at this stage of the Board's evaluation of the LSr pipeline proposal to require the Applicants to undertake a further response. Such detailed information is more appropriately the subject of discussion during detailed route proceedings. The Board, therefore, dismisses the MPLA SAPL's motion with respect to these Information Requests.

Information Requests IR 1.6(b), 1.21(d), 1.64(d) and 1.64(e)

In IR 1.6(b), the MPLA SAPL requested details for the calculations underlying the Applicants' estimated capital cost for land acquisition. In response to the MPLA SAPL Motion, the Applicants noted their original response to the IR that the estimated capital cost of land is comprised of the cost of services and administration associated with the land acquisition, plus the cost of acquiring the land and settling the losses and damages arising from construction. EPI advised that these costs were estimated to be $2.5 million and $9.5 million, respectively. The MPLA SAPL stated that, in order to evaluate the adequacy of the Applicants' proposed mitigation of construction damages through compensation, they require a breakdown of the $9.5 million cost for acquiring the land and settling the losses and damages arising from construction as between land acquisition costs and construction damage and loss related costs.

IR 1.21(d) requests Enbridge's policy for crop loss compensation. Initially the Applicants refused to answer this Information Request on the basis that the issue of compensation is beyond the jurisdiction of the Board; however, in response to the Motion, the Applicants replied that landowners would be compensated for all crop losses and the Applicants would handle those on a case-by-case basis. MPLA SAPL submitted that they require further details from the Applicants regarding the determination of crop loss compensation, including the measurement of yield loss, the determination of applicable crop prices and the timing of payment of landowners.

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In IR 1.64(d), the MPLA SAPL requested any crop loss studies conducted by or for Enbridge related to its past or present construction practices. While initially the Applicants refused to answer this Information Request on the basis that the issue of compensation is beyond the jurisdiction of the Board, in response to the Motion, the Applicants responded that no crop loss studies have been prepared by or for Enbridge related to its past or present construction practices.

With respect to IR 1.64(e), MPLA SAPL stated that they require details of past crop loss claims made to the Applicants and the resolution of those claims in order to assess the adequacy of the mitigation strategy. The Applicants initially refused to answer this Information Request on the basis that the issue of compensation is beyond the jurisdiction of the Board. In response to the Motion, the Applicants indicated that details of past crop loss claims made by landowners are not germane to the consideration of the LSr pipeline application and expressed concern about publicly disclosing such particulars.

The Board accepts that the Applicants have proposed compensation as one of the mitigation measures to address various Project impacts and that for that limited purpose compensation is relevant. Although, the Board recognizes that the sufficiency of compensation as a mitigation measure is relevant. Although the Board has no authority within the *National Energy Board Act* to establish the appropriate level of compensation, the *National Energy Board Act* establishes a separate process administered by the Minister of Natural Resources Canada to address situations where a company and an owner of lands have not agreed on the amount of compensation payable under the Act for the acquisition of lands or for damages suffered as a result of the operations of the company or on any issue related to that compensation. This process ensures that there is an avenue available to both companies and landowners to ensure that compensation matters can be determined in accordance with legislated guidelines such as those outlined in Section 97 of the Act. Section 97 states that an Arbitration Committee must determine all compensation matters referred to in a notice of arbitration served on it and in doing so shall consider, where applicable, the loss of use to the owner of the lands by the company. The existence of this process means that the details and appropriateness of compensation proposals can be evaluated in the context of such proceedings.

The Board is satisfied that the Applicants have responded fully to both IR 1.21 and IR 1.64(d). With respect to the detailed information requested in IR 1.6(b) and IR 1.64(e), the Board is of the view that, balancing the three criteria of relevance, significance and reasonableness, these Information Requests seek information that does not appear to be sufficiently significant or probative to the Board's assessment to require the Applicants to undertake a further response to these Information Requests. Therefore, the Board declines to order the Applicants to file further responses to IRs 1.6(b), 1.21, 1.64(d) and 1.64(e).

IR 1.32 and 1.34

The MPLA SAPL requested copies of EPI's existing operations and maintenance manuals as well as EPI's Engineering Standards and Guidelines. The MPLA SAPL submitted that this information was necessary in order to fully and adequately assess the Applicants' assurances that

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safety and stewardship of the natural environment are addressed by Enbridge's operational policies, practices and activities.

The Applicants indicated that the referenced operations and maintenance manuals only relate to existing pipelines and have yet to be revised to incorporate the proposed facilities. With respect to the Applicants' Engineering Standards and Guidelines, the Applicants have commented that these Standards and Guidelines contain commercially valuable information and are proprietary to EPI. The Applicants further stated that the Applicants will comply with the requirements of the *Onshore Pipeline Regulations, 1999* and with the standards of the Canadian Standards Association Z662-03. The Applicants have indicated that they have provided significant information respecting their plans for the construction and operation of the LSr pipeline and that they have described the contents of the detailed manuals and programs that will be developed. The Applicants have also stated that they would answer hearing questions regarding their plans for the construction and operation of the LSr pipeline, including questions with respect to how the LSr pipeline will be constructed and operated in a manner that ensures safety and protects the environment.

The Board notes that the operations and maintenance manuals requested do not currently relate to the proposed Southern Lights Project and that these manuals will be revised to incorporate the Line 13 reversal, the Line 2 modifications and the LSr pipeline. Given that these manuals do not currently address the proposed Project, the Board declines to order the Applicants to provide copies of its existing operations and maintenance manuals as requested in IR 1.32.

With respect to the request for the Applicants' Engineering Standards and Guidelines, the Board notes the significant number of documents listed in Table A-2 of the Application. The NEB Filing Manual requires confirmation that the applied-for project will comply with company manuals and confirmation that these manuals comply with the *Onshore Pipeline Regulations, 1999* and the codes and standards for the Project. The Applicants have indicated in their Application that the Project will comply with company manuals and that these manuals comply with *Onshore Pipeline Regulations, 1999* and codes and standards. The Board notes that parties will have the opportunity to question the Applicants with respect to their proposed construction and operation practices.

The Board will not refuse access to potentially relevant information on the basis that all precautions taken to protect the confidentiality of the information may fail, when there is no evidence before the Board that this is a realistic possibility. However, with respect to the MPLA SAPL's request for copies of all of the referenced Engineering Standards and Guidelines, the Board is of the view that, on balance, the detailed information requested by MPLA SAPL is not sufficiently significant or probative to the Board's assessment to require the Applicants to respond to the these Information Requests. The Board therefore declines to order the requested relief with respect to IR 1.34.

IR 1.37, 1.40, 1.41, 1.43 and 1.78

The MPLA SAPL initially requested that the Board make an order requiring the Applicants to produce a copy of the following documents related to the LSr pipeline: construction plan;

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construction contracts; documented inspection plans; operations plan; and an environmental handbook. After the Applicants indicated that these documents would not be available until the close of the evidentiary record in the OH-3-2007 proceeding, the MPLA SAPL requested that any existing draft or precedent versions of these documents be made available.

The documents requested by MPLA SAPL do not currently exist and will likely not exist until the close of the evidentiary record. The Board notes that the *Onshore Pipeline Regulations, 1999* include specific requirements with respect to filing certain manuals and that the Board can propose conditions to be included in a Certificate, requiring certain documents to be filed with the Board.

The Applicants bear the burden of providing sufficient information in support of their Applications. The Applicants have indicated that they have provided significant information respecting their plans for the construction and operation of the LSr pipeline and that they have described the contents of the detailed manuals and programs that will be developed. They have also committed to answering hearing questions regarding their plans for the construction and operation of the LSR pipeline, including questions with respect to how the LSr pipeline will be constructed and operated in a manner that ensures safety and protects the environment.

While the MPLA SAPL have requested that any existing draft or precedent versions of these documents be made available, the Board is of the view that, given that drafts or precedent versions of such documents are subject to change, the filing of draft documents would not assist the Board in its evaluation of the Applications. The Board therefore declines to order the requested relief with respect to IRs 1.37, 1.40, 1.41, 1.43 and 1.78.

IR 1.50(c)

In IR 1.50(c), the MPLA SAPL requested details of all landowner complaints received by EPI with respect to integrity digs conducted in the past 10 years on the properties of landowners who will be affected by the LSr pipeline construction. The Applicants noted that the requested information is not readily available because EPI does not separately track complaints that relate specifically to integrity digs.

The Board is of the view that the requested information is of limited relevance to the proceeding and it would not be reasonable to require the Applicants to file the requested information. Further, the Board notes that a formal landowner complaints process exists where concerns with respect to existing pipelines can be vetted by the Board.

IR 1.81(c)

In IR 1.81(c), the MPLA SAPL requested copies of depth of cover surveys conducted in 1991 on existing pipelines. The Applicants noted that the survey results do not contain information about the depth of cover proposed for the LSr pipeline and that the documentation comprises many volumes of survey readings taken at 50 metre intervals along the route of the pipelines. The MPLA SAPL expressed its understanding that cover over the existing pipelines may be reduced

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over time by erosion of the soil and other factors. The MPLA/SAPL argued that they require information related to the depth of cover of those existing pipelines in order to test the adequacy of the proposed 0.9 metres depth of the LSr pipeline in relation to land use restrictions that may apply to LSr pipeline easement lands. The MPLA/SAPL state that the Applicants should be required, at the very least, to provide depth of cover survey information related to the properties of MPLA/SAPL members.

The Board is of the view that the 1991 depth of cover surveys for the existing pipelines are of limited relevance to the Board's assessment of the LSr pipeline Application. Matters related to existing pipelines can be addressed through the landowner complaints process. More relevant to the Board's determination is information related to how the Applicants proposes to mitigate diminishing depth of cover and the success/failure rates of such mitigation measures in respect of the LSr pipeline. The Board therefore requires EPI to respond to the following:

> Based upon the latest information collected (during depth of cover surveys, integrity digs, etc.) along the existing mainline pipelines adjacent to the proposed route for the LSr pipeline, are there locations where depth of cover has become shallower than the applicable CSA standard for construction? Please describe in detail the mitigation measures applied to areas where depth of cover has become shallower than the applicable CSA standard for construction along the existing mainline pipelines adjacent to the proposed route for the LSr pipeline, including a description of why the particular mitigation measure was selected and an assessment of pros and cons of each mitigation measure.

The Board requests that the Applicant respond to this information request by **noon, Friday 7 September 2007.**

Request for a Stay

Given the Board's determination on parts (a) and (b) of the MPLA/SAPL's motion, the Board is of the view that a stay of the OH-3-2007 proceedings is not necessary and dismisses the MPLA/SAPL's request for a stay.

Yours truly,

David Young
Acting Secretary

National Energy Board

Office national de l'énergie

File OF-Fac-Oil-E242-2007-01 01
26 October 2007

To: All parties Hearing Order OH-3-2007

Hearing Order OH-3-2007 Southern Lights Pipeline Project
Direction Regarding Standing Buffalo Dakota First Nation (SBDFN) Notice of Motion

In accordance with the Board's letter outlining the process for parties to make submissions regarding the SBDFN Notice of Motion dated 10 October 2007, (the Motion) the Board has received submissions from the Applicants and the Canadian Association of Petroleum Producers opposing the Motion. The Board has also received the SBDFN's reply to those submissions.

In addition to providing a reply to the submissions of other parties on the Motion, the SBDFN raises a further issue "in relation to reasonable apprehension of bias". The SBDFN submits that there has been "a breach of the rules of natural justice and the Board's duty of procedural fairness" and asks this Board to "recuse itself and declare this proceeding a nullity."

Although these allegations have not been properly brought before the Board in the form of a Notice of Motion as required pursuant to section 35 of the *National Energy Board Rules of Practice and Procedure, 1995*, the Board considers it necessary to address them due to their serious nature.

The SBDFN alleges that the fact that the Board has scheduled final argument on the substantial merits of the Southern Lights application for 31 October 2007 implies that the Board has already determined the jurisdictional motion advanced by the SBDFN and apparently did so before receiving the submissions of the respondents and before the SBDFN reply.

The Board advises that no decision has been made on the Motion and will not be made until the Board has had an opportunity to fully consider the Motion and all of the submissions made by the parties. Should it grant the SBDFN Motion, the Board would take all necessary steps, including re-opening the hearing record, to implement its decision. Hearing argument on the merits of the application at this time does not preclude the Board from taking any required steps in that regard.

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As there is a further evidentiary session of the hearing scheduled for 29 October 2007, should any evidence pertaining to the Motion be adduced at that time, parties may make submissions regarding any impact the additional evidence may have on their positions with respect to the Motion during the scheduled argument. The SBDFN may reply to any new submissions made with respect to the Motion either immediately following the Applicants' counsel's Reply Argument, or through a written submission to be filed by no later than **noon, Calgary time, Friday, 2 November 2007**.

The Board wishes to emphasize that any additional submissions with respect to the Motion must be restricted to the impact of any new information that has been put on the record since the parties made their earlier submissions on the Motion. Matters that the SBDFN wishes to address that are outside the scope of the Motion must be addressed in accordance with the schedule outlined in the Board's procedural letter dated 22 October 2007.

With respect to the concerns raised over membership of the Southern Lights and the ACCE hearing panels, the SBDFN seems to suggest that the fact that the Southern Lights Panel Members were and are involved in separate proceedings on separate applications involving similar issues, forecloses their participation in the Southern Lights proceeding. The Board is of the view that this is an untenable position given, among other things, the Board's role as an expert quasi-judicial tribunal. The Board is cognizant of its responsibility to only consider evidence on the record of the Southern Lights proceeding.

As a result the Board has decided not to accede to the request of the SBDFN to recuse itself and will continue with the Southern Lights Hearing as scheduled.

Yours truly,

Claudine Dutil-Berry
Secretary of the Board

Appendix III

NEB Orders including Schedule A

XO-E101-02-2008

IN THE MATTER OF the *National Energy Board Act* (NEB Act) and the regulations made thereunder; and

IN THE MATTER OF an application pursuant to section 58 of the NEB Act dated 9 March 2007 by Enbridge Pipelines Inc. (EPI) for exemptions from sections 30, 31 and 47 of the NEB Act in respect of EPI's Line 2 Modifications, (the Project), filed with the National Energy Board under File OF-Fac-Oil-E101-2007-01 01.

BEFORE the Board on 13 February 2008.

WHEREAS the Board received applications dated 9 March 2007, from EPI and Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP and Enbridge Pipelines Inc. (collectively the Applicants) for the Southern Lights Project consisting of two sub-projects, the Diluent Pipeline Project and the Capacity Replacement Project;

WHEREAS the Board held a public hearing pursuant to Hearing Order OH-3-2007 in respect of the Southern Lights Project ;

AND WHEREAS, pursuant to the *Canadian Environmental Assessment Act* (CEA Act), the Board conducted an environmental screening of the Southern Lights Project and concluded that with the implementation of the Applicants' environmental protection procedures and mitigation measures and the NEB's recommendations the Southern Lights Project is not likely to cause significant adverse environmental effects;

AND WHEREAS the Project, as described in the attached Schedule A, is a part of the Capacity Replacement Project, with an estimated cost of $42 million;

AND WHEREAS the Project will involve modifications to existing Line 2 pipeline facilities and no new land rights will be required;

AND WHEREAS the Board has examined this application and considers it to be in the public interest to grant the relief requested therein;

IT IS ORDERED that, pursuant to section 58 of the NEB Act, the Project as identified in Schedule A, is exempt from the provisions of sections 30, 31, and 47 of the NEB Act, subject to the following conditions:

Unless otherwise specified in a condition, *construction* includes the clearing of vegetation, ground-breaking and other forms of right-of-way and station site preparation that may have an

effect on the environment, but does not include activities associated with normal surveying operations or data collection activities.

General

1. EPI shall comply with all of the conditions contained in this Order unless the Board otherwise directs.

2. Project construction shall not commence until the issuance of the Certificate for the Light Sour Pipeline, which forms a part of the Southern Lights Project.

Engineering

3. EPI shall cause the approved Project to be designed, located, constructed, installed and operated in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding.

Environment

4. EPI shall implement or cause to be implemented all of the policies, practices, programs, mitigation measures, recommendations and procedures for the protection of the environment included in or referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding or in its related submissions.

Commitments

5. EPI shall:

   (a) file with the Board and post on its Company website, at least 60 days before the planned start of construction, a table listing all commitments made by EPI during the OH-3-2007 proceeding related to the Project, conditions imposed by the NEB, and the deadlines associated with each; and

   (b) update the status of the commitments in (a) on its web site at least on a quarterly basis, advising the Board accordingly.

Landowner Complaints

6. EPI shall, for audit purposes, create and maintain records to chronologically track landowner complaints related to the Project. The landowner complaint records shall include:

   (a) the date the complaint was received from the landowner;

   (b) how the complaint was received (e.g., telephone, letter, email, etc.)

   (c) subsequent dates of all telephone calls, visits, correspondence, and the site monitoring/inspections, reports, etc;

(d) updated contact information for all parties involved in the complaint;

(e) detailed description of the complaint;

(f) date of resolution of complaint; and

(g) if no resolution, further action to be taken or an explanation why no further action is required.

Prior to Construction

Welding and Testing Procedures

7. EPI shall develop the joining programs for the Project and file these with the Board for approval at least 60 days prior to commencement of any welding activities to which the programs relate. Each joining program shall include:

(a) requirements for the qualification of welders;

(b) requirements for the qualification and duties of welding inspectors;

(c) the welding techniques and processes EPI would be using;

(d) the welding procedure specifications and procedure qualification records;

(e) the welding procedure specifications for welding on in-service pipelines (where applicable);

(f) the non-destructive examination (NDE) procedures, and supporting procedure qualification records, which detail the ultrasonic and/or radiographic techniques and processes EPI would be using, for each welding technique;

(g) the defect acceptance criteria for each type of weld (i.e. production, tie-in and repair);

(h) an explanation of how the defect acceptance criteria were determined; and

(i) any additional information which supports the joining program.

Construction Schedule

8. EPI shall file with the Board at least 60 days prior to construction, a detailed construction schedule for the Project identifying major construction activities and shall notify the Board of any modifications to the schedule as they occur.

Manuals

9. EPI shall file with the Board at least 60 days prior to construction of the Project a comprehensive health and safety plan for the Project.

During Construction

Archaeological and Heritage Resources

10. EPI shall, in the event that previously unidentified archaeological or heritage resources are discovered:

    (a) immediately cease work at the location of the discovery and notify responsible provincial authorities; and

    (b) resume work only after approval is granted by the responsible provincial authority.

Construction Progress Reports

11. EPI shall file with the Board, construction progress reports on a monthly basis between commencement and completion of construction of the Project, in a form satisfactory to the Board. The reports shall include information on the activities carried out during the reporting period, any environmental, safety and non-compliance issues, and the measures undertaken for the resolution of each issue.

Condition Compliance

12. Within 30 days of the date that the approved Project is placed in service, EPI shall file with the Board a confirmation, by an officer of the company, that the approved Project was completed and constructed in compliance with all applicable conditions of this Order. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Board details as to why compliance cannot be confirmed. The filing required by this condition shall include a statement confirming that the signatory to the filing is an officer of the company.

Expiration of Order

13. Unless the Board otherwise directs prior to 31 August 2009, this Order shall expire on 31 August 2009 unless construction in respect of the facilities has commenced by that date.

SCHEDULE A
Order XO-E101-02-2008

Enbridge Pipelines Inc. Application, dated 9 March 2007, pursuant to section 58 of the *National Energy Board Act*

Southern Lights Project – Line 2 Modification Facilities
File OF-Fac-Oil-E101-2007-01 01

Facilities Specifications

Construction Type	Modification
Facility Type	Instrumentation and Controls Equipment and Piping
Location	EPI's existing 22 pumps stations for Line 2, as listed above (in Alberta, Saskatchewan and Manitoba)
Description	Modifications to the following existing facilities: • Ultrasonic flow meter • Pressure control valves on discharge side of pumps • Emergency shutdown systems
Product	Crude oil
Maximum Operating Pressure	9 650 kPa

SCHEDULE A (continued)
Order XO-E101-02-2008

Location of Pump Station for Line 2			Pump Station Modifications	Modified Pump Units
Alberta	**Edmonton** SE 5-53-23 W4M - NE 32-52-23 W4M	KP 0.0	• Pumps modified and motor replaced • Additional DRA [1] unit	2.1 2.2
	Kingman SE 5-49-20 W4M	KP 51.1	• Pumps replaced • Relocated DRA unit	2.1 2.2
	Strome SW 2-46-15 W4M	KP 112.2	• Pumps replaced • Recommissioned DRA unit	2.1 2.2
	Hardisty SE 30-42-9 W4M	KP 175.4	• Pumps modified and motor replaced • Additional DRA unit	2.1 2.2
	Metiskow SE 1-40-5 W4M	KP 229.6	• Pumps replaced • Recommissioned DRA unit	2.3 2.4
Saskatchewan	**Cactus Lake** NE 32-26-27 W3M	KP 289.8	• Pump replaced • Recommissioned DRA unit	2.1
	Kerrobert SE 34-33-22 W3M	KP 351.3	• Pumps modified and motors replaced • Relocated DRA unit	2.1 2.2 2.3
	Herschel SE/SW 16-31-16 W3M	KP 413.6	• Pump replaced • Relocated DRA unit	2.1
	Milden SE 6-29-10 W3M	KP 475.0	• Pumps replaced or modified and motor replaced • Relocated DRA unit	2.1 2.2 2.3

[1] DRA: drag reducing agent

SCHEDULE A (continued)
Order XO-E101-02-2008

Location of Pump Station for Line 2			Pump Station Modifications	Modified Pump Units
Saskatchewan	**Loreburn** SW 12-26-5 W3M	KP 538.9	• Pumps modified • Additional DRA unit	2.1 2.2
	Craik SE 10-23-29 W2M - NE 3-23-29 W2M	KP 590.7	• Pumps replaced • Additional DRA unit	2.1 2.2
	Bethune SE 22-19-24 W2M	KP 653.0	• Pumps replaced • Additional DRA unit	2.1 2.2
	Regina NE 32-17-19 W2M	KP 704.2	• Pumps replaced and new pump installed with new motor • Relocated DRA unit	2.1 2.2
	White City SE 1-17-17 W2M	KP 732.5	• Pump replaced and new pump installed with new motor • Relocated DRA unit	2.1
	Odessa SW 35-15-14 W2M	KP 762.0	• Pump replaced • Additional DRA unit	2.2
	Glenavon SW 22-14-9 W2M	KP 812.1	• Pumps replaced or modified • Relocated DRA unit	2.1 2.3 2.4
	Langbank SE/SW 2-13-3 W2M	KP 875.2	• Pump replaced • Relocated DRA unit	2.1
Manitoba	**Cromer** NE 17-9-28 WPM - SE 20-9-28 WPM	KP 958.8	• Additional DRA unit	-
	Souris NE/SE 8-8-20 WPM	KP 1040.0	• Recomissionned DRA unit	-
	Glenboro SE 3-7-14 WPM	KP 1103.3	• Additional DRA unit	-
	Manitou NW 17-4-8 WPM	KP 1165.1	• Additional DRA unit	-
	Gretna SE 8-1-1 WPM	KP 1242.4	• Additional DRA unit	-

ORDER XO-E101-03-2008

IN THE MATTER OF the *National Energy Board Act* (NEB Act) and the regulations made thereunder; and

IN THE MATTER OF an application pursuant to section 58 of the NEB Act dated 9 March 2007 by Enbridge Southern Lights GP on behalf of

Enbridge Southern Lights LP (ESL) for exemptions from sections 30, 31 and 47 of the NEB Act in respect of the Line 13 Reversal Facilities, (the Project), filed with the National Energy Board under File OF-Fac-Oil-E101-2007-01 01.

BEFORE the Board on 13 February 2008.

WHEREAS the Board received applications dated 9 March 2007, from Enbridge Pipelines Inc. and ESL (collectively the Applicants) for the Southern Lights Project consisting of two sub-projects, the Diluent Pipeline Project and the Capacity Replacement Project;

AND WHEREAS the Project, as described in the attached Schedule A, is a part of the Diluent Pipeline Project, with an estimated cost of $44 million;

AND WHEREAS the Board held a public hearing pursuant to Hearing Order OH-3-2007 in respect of the Southern Lights Project;

AND WHEREAS, pursuant to the *Canadian Environmental Assessment Act* (CEA Act), the Board conducted an environmental screening of the Southern Lights Project and concluded that with the implementation of the Applicants' environmental protection procedures and mitigation measures and the NEB's recommendations the Southern Lights Project is not likely to cause significant adverse environmental effects;

AND WHEREAS Line 13 would remain in low vapour pressure service and the Project does not involve an increase in maximum operating pressures;

AND WHEREAS the Project will take place within existing pump stations and valve sites on the Line 13 Right of Way and no new land rights are required;

AND WHEREAS the Board has examined this application and considers it to be in the public interest to grant the relief requested therein;

IT IS ORDERED that, pursuant to section 58 of the NEB Act, the Project as identified in Schedule A, is exempt from the provisions of sections 30, 31 and 47 of the NEB Act, subject to the following conditions:

Unless otherwise specified in a condition, *construction* includes the clearing of vegetation, ground-breaking and other forms of right-of-way and station site preparation that may have an

effect on the environment, but does not include activities associated with normal surveying operations or data collection activities.

General

1. ESL shall comply with all of the conditions contained in this Order unless the Board otherwise directs.

2. Project construction shall not commence until the issuance of the Certificate for the Light Sour Pipeline, which forms a part of the Southern Lights Project.

Engineering

3. ESL shall cause the approved Project to be designed, located, constructed, installed, and operated in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding.

Environment

4. ESL shall implement or cause to be implemented all of the policies, practices, programs, mitigation measures, recommendations and procedures for the protection of the environment included in or referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding or in its related submissions.

Commitments

5. ESL shall:

   (a) file with the Board and post on its Company website, at least 60 days before the planned start of construction, a table listing all commitments made by ESL during the OH-3-2007 proceeding, conditions imposed by the NEB, and the deadlines associated with each;

   and

   (b) update the status of the commitments in (a) on its web site at least on a quarterly basis, advising the Board accordingly.

Landowner Complaints

6. ESL shall, for audit purposes, create and maintain records to chronologically track landowner complaints related to the Project. The landowner complaint records shall include:

   (a) the date the complaint was received from the landowner;

   (b) how the complaint was received (e.g., telephone, letter, email, etc.)

(c) subsequent dates of all telephone calls, visits, correspondence, and the site monitoring/inspections, reports, etc;

(d) updated contact information for all parties involved in the complaint;

(e) detailed description of the complaint;

(f) date of resolution of complaint; and

(g) if no resolution, further action to be taken or an explanation why no further action is required.

Construction Schedule

7. ESL shall file with the Board at least 60 days prior to construction, a detailed construction schedule identifying major construction activities and shall notify the Board of any modifications to the schedule as they occur.

Manuals

8. ESL shall file with the Board at least 60 days prior to construction a comprehensive health and safety plan.

Welding and Testing Procedures

9. ESL shall develop the joining programs for the Project and file these with the Board for approval at least 60 days prior to commencement of any welding activities to which the programs relate, in preparation for Project. Each joining program shall include:

(a) requirements for the qualification of welders;

(b) requirements for the qualification and duties of welding inspectors;

(c) the welding techniques and processes ESL would be using;

(d) the welding procedure specifications and procedure qualification records;

(e) the welding procedure specifications for welding on in-service pipelines (where applicable);

(f) the non-destructive examination (NDE) procedures, and supporting procedure qualification records, which detail the ultrasonic and/or radiographic techniques and processes ESL would be using, for each welding technique;

(g) the defect acceptance criteria for each type of weld (i.e. production, tie-in and repair);

(h) an explanation of how the defect acceptance criteria were determined; and

(i) any additional information which supports the joining program.

During Construction

Archaeological and Heritage Resources

10. ESL shall, in the event that previously unidentified archaeological or heritage resources are discovered:

    (a) immediately cease work at the location of the discovery and notify responsible provincial authorities; and

    (b) resume work only after approval is granted by the responsible provincial authority.

Construction Progress Reports

11. ESL shall file with the Board, construction progress reports on a monthly basis between commencement and completion of construction, in a form satisfactory to the Board. The reports shall include information on the activities carried out during the reporting period, any environmental, safety and non-compliance issues, and the measures undertaken for the resolution of each issue.

Engineering Assessment and Potential Hydrotesting of Line 13

12. ESL shall file with the Board for approval, at least nine months prior to placing Line 13 into diluent service, an engineering assessment (EA) in accordance with the Canadian Standards Association Z662-07, *Oil and Gas Pipeline Systems* which evaluates the pipeline's fitness for purpose, for the proposed reversal of flow. The EA shall account for, but not be limited to:

    (a) a comparison of excavation findings with associated results from all crack in-line inspections (ILI) performed during current service, and with associated results from the most recent geometry ILIs;

    (b) a confirmation of the accuracy of the ILI tools, or measures undertaken to mitigate potential inaccuracies;

    (c) the pipeline condition after completion of repairs, including type and dimensions of remaining crack and geometry features;

    (d) a comparison of operation prior to reversal versus future service conditions, including cyclical loading estimates;

    (e) the estimated defect growth and time until failure, once Line 13 is reversed;

    (f) pipe design and material properties (such as toughness) of the various Line 13 portions;

    (g) transient analyses completed on Line 13;

(h) consequences of failure, with regard to pipe properties described in f); and

(i) other potential hazards that may be aggravated by the proposed reversal of Line 13.

In the event that the Board is not satisfied that the engineering assessment demonstrates that Line 13 may safely commence operation in diluent service, ESL shall be required to hydrotest all, or portions of Line 13. If hydrotesting is required, ESL shall file with the Board for approval its Pressure Testing Program at least four weeks prior to the commencement of pressure testing activities.

During Operation

Revised Engineering Assessment

No later than six months after placing Line 13 into diluent service, ESL shall submit to the Board a revised engineering assessment to account for actual operating pressure profiles and pressure cycle data gathered since the reversal of flow. As part of ESL's engineering assessment, estimated defect growth rates and in-line inspection intervals shall be adjusted accordingly.

Emergency Response Exercise

14. Within six (6) months after commencement of operation of the Project:

(a) ESL shall conduct an emergency response exercise at its South Saskatchewan River crossing and relevant downstream control points with the objectives of testing:

- emergency response procedures, including response times;
- training of company personnel;
- communications systems;
- response equipment;
- safety procedures; and
- effectiveness of its liaison and continuing education programs.

(b) ESL shall notify the Board, at least thirty (30) days prior to the date of the emergency response exercise, of the following:

- the date(s) and location(s) of the exercise;
- the type of exercise;
- the exercise scenario;
- the proposed participants in the exercise;
- the objectives of the exercise; and
- the evaluation criteria.

(c) ESL shall file with the Board, within sixty (60) days after the emergency response exercise outlined in (a), a final report on the exercise including:

- the results;
- how objectives were achieved;
- areas for improvement; and
- steps to be taken to correct deficiencies.

Condition Compliance

15. Within 30 days of the date that the approved Project is placed in service, ESL shall file with the Board a confirmation, by an officer of the company, that the approved Project was completed and constructed in compliance with all applicable conditions of this Order. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Board details as to why compliance cannot be confirmed. The filing required by this condition shall include a statement confirming that the signatory to the filing is an officer of the company.

Expiration of Order

16. Unless the Board otherwise directs prior to 31 August 2009, this Order shall expire on 31 August 2009 unless construction in respect of the facilities has commenced by that date.

SCHEDULE A
Order XO-E101-03-2008

Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP Application, dated 9 March 2007,
Pursuant to section 58 of the *National Energy Board Act*

Southern Lights Project – Line 13 Reversal Facilities
File OF-Fac-Oil-E101-2007-01 01

Facilities Specifications

Construction Type	Modification	
Facility Type	Check Valves	
Location	KP 1244.6 KP 1213.5 KP 1200.2 KP 937.9 KP 890.6 KP 660.9	(between United States border and Gretna station) (between stations Gretna and St. Leon) (between stations Gretna and St. Leon) (between stations Cromer and Langbank) (between stations Cromer and Langbank) (between stations Regina and Craik)
Description	Modifications to six existing check valves : • reversal • reuse or replacement with new check valve • potential relocation along Line 13	
Product	Low vapour phase (LVP) products for diluent: • natural gas condensates • other light hydrocarbon products	

SCHEDULE A (continued)
Order XO-E101-03-2008

Location of Pump Station for Line 13			Pump Station Modifications			
			Inlet and outlet piping	DRA injection unit [1]	Delivery equipment and meters	Scraper traps [2]
Manitoba	**Gretna** SE 8-1-1 WPM	KP 1242.4	Reversed	New	-	-
	St. Leon SW 33-4-9 WPM	KP 1155.6	Reversed	-	-	-
	Glenboro SE 3-7-14 WPM	KP 1103.3	Reversed	-	-	-
	Souris NE/SE 8-8-20 WPM	KP 1040.0	Reversed	New	-	-
	Cromer NE 17-9-28 WPM - SE 20-9-28 WPM	KP 958.8	Reversed	New	-	Modified
Saskatchewan	**Langbank** SE/SW 2-13-3 W2M	KP 875.2	Reversed	-	-	-
	Glenavon SW 22-14-9 W2M	KP 812.1	Reversed	-	-	-
	Odessa SW 35-15-14 W2M	KP 762.0	Reversed	-	-	-
	Regina NE 32-17-19 W2M	KP 704.2	Reversed	-	-	Modified
	Craik SE 10-23-29 W2M - NE 3-23-29 W2M	KP 590.7	Reversed	-	-	-
	Loreburn SW 12-26-5 W3M	KP 538.9	Reversed	-	-	-
	Herschel SE/SW 16-31-16 W3M	KP 413.6	Reversed	-	-	-
	Kerrobert SE 34-33-22 W3M	KP 351.3	Reversed	-	New	Modified
Alberta	**Metiskow** SE 1-40-5 W4M	KP 229.6	Reversed	-	-	-
	Hardisty SE 30-42-9 W4M	KP 175.4	Reversed	New	New	-
	Kingman SE 5-49-20 W4M	KP 51.1	Reversed	-	-	-
	Edmonton SE 5-53-23 W4M - NE 32-52-23 W4M	KP 0.0	Pumps idled	-	New	-

[1] DRA: drag reducing agent
[2] The scraper trap facility at KP 899.9 near Kelso (Saskatchewan) will also be modified.

MO-03-2008

IN THE MATTER OF the *National Energy Board Act* (NEB Act) and the regulations made thereunder; and

IN THE MATTER OF an application by Enbridge Pipelines Inc. and Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL), collectively the Applicants, for leave to transfer certain mainline facilities (Line 13 facilities) from EPI to Enbridge Southern Lights LP, pursuant to paragraphs 74(1)(a) and 74(1)(b) of the NEB Act, and for an exemption pursuant to subsection 129(1.1), dated 9 March 2007, filed with the National Energy Board under File OF-Fac-Oil-E242-2007-01 01.

BEFORE the Board on 13 February 2008.

WHEREAS the Board received applications dated 9 March 2007, from the Applicants for the Southern Lights Project, consisting of two sub-projects, the Diluent Pipeline Project and the Capacity Replacement Project;

AND WHEREAS the transfer of the Line 13 facilities as described in the attached Schedule A, are part of the Diluent Pipeline Project:

WHEREAS the Board held a public hearing pursuant to Hearing Order OH-3-2007 in respect of the Southern Lights Project ;

AND WHEREAS the transfer is not subject to environmental assessment under the *Canadian Environmental Assessment Act*;

AND WHEREAS EPI owns the EPI mainline crude oil transmission system (Mainline) pursuant to Certificates of Public Convenience and Necessity OC-1 dated 9 May 1960, as amended by Order No. AO-1-OC-1 dated 28 October 1971; and OC-38 dated 18 March 1994;

AND WHEREAS the Applicants have agreed that, in consideration for EPI transferring Line 13 out of EPI Mainline service, Enbridge Southern Lights LP would pay to replace its capacity with the new LSr Pipeline and the Line 2 Modifications;

AND WHEREAS the Board's decisions on the two projects that comprise the Southern Lights Project are set out in its OH-3-2007 Reasons for Decision dated February 2008, and in this Order;

IT IS ORDERED, pursuant to paragraphs 74(1)(a) and 74(1)(b) of the Act and subject to the issuance of a Certificate for the Light Sour Pipeline, that leave for the transfer of the Line 13 facilities from EPI to Enbridge Southern Lights LP is granted;

IT IS FURTHER ORDERED THAT, pursuant to subsection 129(1.1), an exemption is granted from the *Oil Pipeline Uniform Accounting Regulations* requirement that, where facilities are

purchased from an affiliated company, the original cost of the facilities and accumulated depreciation is recorded in the accounts of the purchasing company;

IT IS FURTHER ORDERED THAT, unless the Board otherwise directs, this Order shall expire by 1 July 2010 unless the Board has been advised that the transaction has been completed.

NATIONAL ENERGY BOARD

Claudine Dutil-Berry
Secretary of the Board

Schedule A
National Energy Board
Order MO-03-2008

EPI/ESL Application for
Leave to Transfer Certain Pipeline Facilities
File OF-Fac-Oil-E242-2007-01 01

Facilities

- 704.2 kilometres of 508 mm (NPS 20) outside diameter pipeline, 58.9 kilometres of
- 457 mm (NPS 18) outside diameter pipeline and 482.0 kilometres of 406.4 mm (NPS 16) outside diameter pipeline commencing at Edmonton, Alberta and terminating at the Canada / US border near Gretna, Manitoba
- 17 Line 13 Pump Stations
- 46 Block Valves and 6 Check Valves

Appendix IV

Light Sour Crude Oil Pipeline Certificate Conditions

General

Unless otherwise specified in a condition, *construction* includes the clearing of vegetation, ground-breaking and other forms of right-of-way and station site preparation that may have an effect on the environment, but does not include activities associated with normal surveying operations or data collection activities.

1. Enbridge Pipeline Inc (EPI) shall comply with all of the conditions contained in this Certificate unless the Board otherwise directs.

Engineering

2. EPI shall cause the approved Project to be designed, located, constructed, installed, and operated in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding.

Environment

3. EPI shall implement or cause to be implemented all of the policies, practices, programs, mitigation measures, recommendations and procedures for the protection of the environment included in or referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding or in its related submissions.

Commitments

4. EPI shall:

   (a) file with the Board and post on its Company website, at least 60 days before the planned start of construction, a table listing all commitments made by EPI during the OH-3-2007 proceeding in relation to the Light Sour (LSr) pipeline, conditions imposed by the NEB, and the deadlines associated with each; and

   (b) update the status of the commitments in (a) on its web site at least on a quarterly basis, advising the Board accordingly.

Landowner Complaints

5. EPI shall, for audit purposes, create and maintain records to chronologically track landowner complaints related to the LSr pipeline. The landowner complaint records shall include:

   (a) the date the complaint was received from the landowner;

(b) how the complaint was received (e.g., telephone, letter, email, etc.)

(c) subsequent dates of all telephone calls, visits, correspondence, and the site monitoring/inspections, reports, etc;

(d) updated contact information for all parties involved in the complaint;

(e) detailed description of the complaint;

(f) date of resolution of complaint; and

(g) if no resolution, further action to be taken or an explanation why no further action is required.

Prior to Construction

Construction Schedule

6. EPI shall file with the Board at least 60 days prior to construction of the LSr Station Facilities, a detailed construction schedule identifying major construction activities and shall notify the Board of any modifications to the schedule as they occur.

7. EPI shall file with the Board at least 60 days prior to construction of the LSr Pipeline excluding the LSr Station Facilities, a detailed construction schedule identifying major construction activities and shall notify the Board of any modifications to the schedule as they occur.

Welding and Testing Procedures

8. EPI shall develop the joining program for the LSr Station Facilities and file these with the Board at least 60 days prior to commencement of any welding activities to which the programs relate. Each joining program shall include:

(a) requirements for the qualification of welders;

(b) requirements for the qualification and duties of welding inspectors;

(c) the welding techniques and processes EPI would be using;

(d) the welding procedure specifications and procedure qualification records;

(e) the welding procedure specifications for welding on in-service pipelines (where applicable);

(f) the non-destructive examination (NDE) procedures, and supporting procedure qualification records, which detail the ultrasonic and/or radiographic techniques and processes EPI would be using, for each welding technique;

(g) the defect acceptance criteria for each type of weld (i.e. production, tie-in and repair);

(h) an explanation of how the defect acceptance criteria were determined; and

(i) any additional information which supports the joining program.

9. EPI shall develop the joining program for the LSr Pipeline excluding the LSR Station Facilities and file these with the Board at least 60 days prior to the commencement of any welding activities to which the programs relate. Each joining program shall include:

(a) requirements for the qualification of welders;

(b) requirements for the qualification and duties of welding inspectors;

(c) the welding techniques and processes EPI would be using;

(d) the welding procedure specifications and procedure qualification records;

(e) the welding procedure specifications for welding on in-service pipelines (where applicable);

(f) `the non-destructive examination (NDE) procedures, and supporting procedure qualification records, which detail the ultrasonic and/or radiographic techniques and processes EPI would be using, for each welding technique;

(g) the defect acceptance criteria for each type of weld (i.e. production, tie-in and repair);

(h) an explanation of how the defect acceptance criteria were determined; and

(i) any additional information which supports the joining program.

Manuals

10. EPI shall file with the Board the following programs and manuals within the time specified:

(a) comprehensive health and safety plan related to the LSr Station Facilities–at least 60 days prior to construction of the LSr Station Facilities;

(b) comprehensive health and safety plan related to the LSr Pipeline excluding the LSr Station Facilities–at least 60 days prior to construction of the LSr Pipeline excluding the LSr Station Facilities; and

(c) field pressure testing program for the LSr Pipeline – at least 14 days prior to pressure test.

Environmental Protection Plan

11. EPI shall file with the Board for approval, at least 60 days prior to construction of the LSr Station Facilities, an updated project-specific Environmental Protection Plan (EPP). The EPP shall describe all environmental protection procedures, and mitigation and monitoring commitments related to the LSr Station Facilities, as set out in EPI's application or as otherwise agreed to during questioning, in its related submissions or through consultations with other government agencies. Construction of the LSr Station Facilities shall not commence until EPI has received approval of its EPP from the Board.

12. EPI shall file with the Board for approval, at least 60 days prior to construction of the LSr Pipeline excluding the LSR Station Facilities, an updated project-specific Environmental Protection Plan (EPP). The EPP shall describe all environmental protection procedures, and mitigation and monitoring commitments related to the LSr Pipeline excluding the LSr Station Facilities, as set out in EPI's application or as otherwise agreed to during questioning, in its related submissions or through consultations with other government agencies. Construction of the LSr Pipeline excluding the LSr Station Facilities shall not commence until EPI has received approval of its EPP from the Board.

Archaeology and Paleontology

13. EPI shall:

    (a) file with the Board, at least 60 days prior to the commencement of construction of the LSr Station Facilities, the results of the archaeological and paleontological investigations in the areas of the LSr Station Facilities; and

    (b) include the recommendations resulting from the archaeological and paleontological investigations.

14. EPI shall:

    (a) file with the Board, at least 60 days prior to the commencement of construction of the LSr Pipeline excluding the LSr Station Facilities, the results of the archaeological and paleontological investigations; and

    (b) include the recommendations resulting from the archaeological and paleontological investigations, including those for the Thornhill Burial Mounds, in the EPP.

During Construction

Archaeological and Heritage Resources

15. EPI shall, in the event that previously unidentified archaeological or heritage resources are discovered:

    (a) immediately cease work at the location of the discovery and notify responsible provincial authorities; and

    (b) resume work only after approval is granted by the responsible provincial authority

Construction Progress Reports

16. EPI shall file with the Board, construction progress reports on a monthly basis between commencement and completion of construction, in a form satisfactory to the Board. The reports shall include information on the activities carried out during the reporting period, any environmental, safety and non-compliance issues, and the measures undertaken for the resolution of each issue.

Depth of Cover Monitoring Program

17. EPI shall:

    (a) file with the Board for approval within 90 days of the commencement of operation of the LSr Pipeline, a Pipeline Depth Monitoring Program (PDMP) which would include:

        (i) the frequency of monitoring;

        (ii) the methodology to undertake monitoring;

        (iii) mitigation measures if locations shallower than 0.6 m of cover are discovered during monitoring, including the maximum time interval from the time EPI is made aware of the occurrence of low cover to the implementation of remediation efforts; and

        (iv) means by which findings of the PDMP will be communicated to affected landowners and how their comments will be included in the development of mitigation strategies;

    (b) integrate the PDMP into its Pipeline Integrity Management Program and submit a description of how this has been accomplished; and

    (c) provide a description of the consultation with landowners along the LSr route that was undertaken in the development of the PDMP.

Condition Compliance

18. Within 30 days of the date that the approved Project is placed in service, EPI shall file with the Board a confirmation, by an officer of the company, that the approved Project was completed and constructed in compliance with all applicable conditions of this Order. If compliance with any of these conditions cannot be confirmed, the officer of the company shall file with the Board details as to why compliance cannot be confirmed. The filing required by this condition shall include a statement confirming that the signatory to the filing is an officer of the company.

19. On or before the 31 of January of each of the first 5 years following the commencement of the operation of the LSr Pipeline, EPI shall file with the Board, and make available on its website for informational purposes, a post-construction environmental report that:

    (a) identifies on a map or diagram the location of any environmental issues which arose during construction;

    (b) discusses the effectiveness of the mitigation applied during construction and the methodology used to assess the effectiveness of mitigation;

    (c) identifies the current status of the issues identified (including those raised by landowners), and whether those issues are resolved or unresolved; and

    (d) provides proposed measures and timelines EPI shall implement to address any unresolved concerns.

    The report shall address, but not be limited to, issues pertaining to soil productivity on cultivated lands, weeds, reclamation of native prairie, water course crossings, and plant species of special concern.

Expiration of Certificate

20. Unless the Board otherwise directs prior to 31 August 2009, this Certificate shall expire on 31 August 2009 unless construction in respect of the facilities has commenced by that date.

Appendix V

Environmental Screening Report

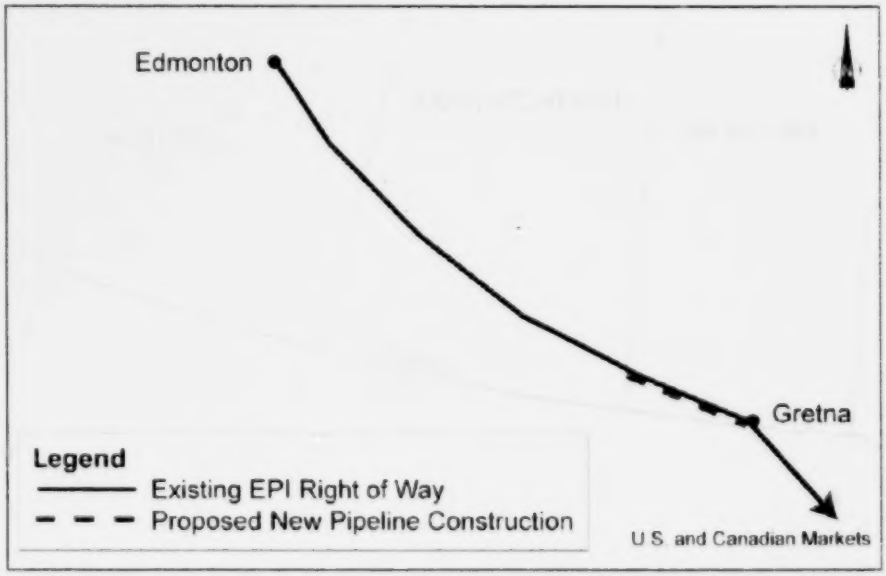
National Energy Board | Office national de l'énergie

ENVIRONMENTAL SCREENING REPORT

Pursuant to the *Canadian Environmental Assessment Act* (CEA Act)

Southern Lights Project

Applicants:	Enbridge Pipelines Inc. (EPI) Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL) EPI and ESL are collectively referred to as "the Applicants"		
Application Date:	9 March 2007 (Preliminary Information Package 14 November 2006)	**CEA Act Registration Date:**	24 November 2006
National Energy Board File Numbers:	OF-Fac-Oil-E242-2007-01 01 OF-Fac-Oil-E242-2006-01 01	**Canadian Environmental Assessment Registry Number:**	06-01-23919
CEA Act Law List Triggers:	Section 52 and subsection 58(1) of the *National Energy Board Act* (NEB Act)	**CEA Act Determination Date:**	5 February 2008



Canada

SCREENING SUMMARY

The Applicants applied for the approval of a number of physical works and activities that would move diluent from Chicago to Edmonton through an existing pipeline, which currently moves crude oil in the opposite direction. To offset the potential loss of crude oil capacity, Enbridge Pipelines Inc. has also applied to construct approximately 288 km of new pipeline and modify existing pumping stations along its existing infrastructure.

The National Energy Board (Board or NEB) is the Federal Environment Assessment Coordinator for the applied-for project (Project). Transport Canada and Indian and Northern Affairs Canada have declared themselves as Responsible Authorities and Environment Canada, Department of Fisheries and Oceans, Natural Resources Canada and Health Canada declared themselves as Federal Authorities who were in the possession of specialist advice. Manitoba provincial agencies and a number of interested parties also participated in the environmental assessment process.

A number of potential adverse environmental effects of the Project, both bio-physical and socio-economic, were identified. Issues of public concern mainly focused on reduced soil capability and the potential for water contamination resulting from an accidental product release from the proposed pipeline and the existing pipeline to be reversed.

The NEB has considered information provided by the Applicants, government departments, and the public during its review of the Project. The Board is of the view that, provided all commitments and environmental protection measures made by the Applicants are upheld, and the Board's recommendations are implemented, the proposed Project is not likely to cause significant adverse environmental effects.

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Alberta
Alberta Clipper	Enbridge Pipelines Inc.'s proposed Alberta Clipper Expansion Project
Applicants	collectively, ESL and EPI
Board or NEB	National Energy Board
CEA Act	*Canadian Environmental Assessment Act*
DFO	Department of Fisheries and Oceans
DRA	drag reducing agent
EA	environmental assessment
EC	Environment Canada
EPI	Enbridge Pipelines Inc.
ERP	emergency response plan
ERCB	Energy Resources Conservation Board (Effective 1 January 2008, the Alberta Energy and Utilities Board was realigned into two separate regulatory bodies, the Energy Resources Conservation Board, which regulates the energy industry, and the Alberta Utilities Commission, which regulates the utilities industry.)
ESL	Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP
ESR or Report	Environmental Screening Report
FAs	Federal Authorities as defined in subsection 2(1) of the CEA Act
HC	Health Canada
INAC	Indian and Northern Affairs Canada
ha	hectare
km	kilometre
KP	kilometre post
LSr Pipeline	light sour crude oil pipeline and associated facilities
LSr Station Facilities	LSr Pipeline pumping and related facilities and pump station piping at three existing EPI pump station sites
m	metre
mm	millimetre
MPLA	Manitoba Pipeline Landowners Association
MB	Manitoba
MC	Manitoba Conservation
MIA	Manitoba Intergovernmental Affairs
MIT	Manitoba Infrastructure and Transportation
MWS	Manitoba Water Stewardship
MVA	Meewasin Valley Authority
NEB Act	*National Energy Board Act*
RAs	Responsible Authorities as defined in subsection 2(1) of the CEA Act

RoW	right of way
SK	Saskatchewan
SAPL	Saskatchewan Association of Pipeline Landowners
SARA	*Species at Risk Act*
TC	Transport Canada
US	United States

1.0 INTRODUCTION

1.1 Project Overview

Enbridge Pipelines Inc. (EPI) owns and operates the Canadian portion of a mainline pipeline system, which currently transports crude oil and petroleum products from Edmonton, Alberta (AB) to the Canada – United States (US) border near Gretna, Manitoba (MB) [Canada/US Border]. This system is comprised of a number of lines including Line 2 and Line 13, all of which extend into the US to reach American and Canadian market locations. Several existing pump stations and valve locations associated with the various lines occur along this right of way (RoW).

The Applicants[1] are proposing to construct and operate the Southern Lights Project (the Project) which, in Canada, would consist of the following three components:

1. construction and operation of a light sour crude oil pipeline, including associated infrastructure at pump stations (LSr Station Facilities), collectively referred to as the LSr Pipeline;
2. modifications to infrastructure on Line 2; and
3. conversion of the existing Line 13 from crude oil service to diluent service[2] and the subsequent reversal of the flow from south to north

The proposed work also requires the construction and operation of pipelines and facilities in the US; however, those works are beyond the scope of this Project.

1.2 Information Sources used in this ESR

This Environmental Screening Report (ESR) is based on information from the following sources:

- Project application (Volume I – Application, Volume II – Report on Environmental and Socio-Economic Assessment, and Volume III – Environmental Alignment Sheets)
- supplementary filings to the Project application;
- responses to information requests;
- various EPI manuals referenced in the Project application (e.g. Environmental Guidelines for Construction (December 2003), Waste Management Plan (October 2004);

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1 The term "Applicants" includes both EPI and Enbridge Southern Lights GP on behalf of Enbridge Southern Lights LP (ESL). Although EPI owns and operates existing pipeline and associated facilities and will be constructing all the new facilities mentioned above, EPI will retain ownership of the Line 13 reversal component of the Project prior to any construction of that component. The term "Applicants" will be used in this report in circumstances where responsibility applies to both parties.

2 Extra heavy oil and bitumen typically require diluent to thin raw production in order to meet specifications for transportation by pipeline. The Project's potential diluent supply sources fall into three broad categories: light hydrocarbon streams recycled from refineries; natural gasoline produced at natural gas liquids fractionators; and imports to North America of natural gasoline.

- submissions from the public and interested parties; and
- evidence submitted at the oral public hearing.

Filed information pertaining to the Project application can be found within 'Regulatory Documents' on the National Energy Board (NEB or Board) website (www.neb-one.gc.ca). For more details on how to obtain documents, please contact the Secretary of the NEB at the address specified in Section 11.0 of this ESR.

2.0 RATIONALE FOR THE PROJECT

The reversal and change of service of Line 13 would provide a new diluent transportation service from Chicago, Illinois to Edmonton, AB in order to meet the need for diluent related to the forecasted increase in production of Western Canadian heavy oil and bitumen between 2010 and 2025.

The construction of the proposed LSr Pipeline (additional capacity) and the modifications to Line 2 (increased pumping horsepower for increased throughput) are intended to compensate for the removal of Line 13 from crude oil service.

3.0 ENVIRONMENTAL ASSESSMENT PROCESS

An application for a number of approvals to construct and operate the Project, which is comprised of the three components outlined in Section 1.0 of this Report, was submitted to the Board on 9 March 2007 pursuant to section 52 and subsection 58(1) of the NEB Act.

The above-mentioned sections of the NEB Act are identified in the *Canadian Environmental Assessment Act* (CEA Act) *Law List Regulations,* thereby triggering the requirement for the preparation of this ESR.

3.1 Government Participation in the Environmental Assessment (EA) Process

The NEB is the Federal Environment Assessment Coordinator for this Project. Upon receipt of a Preliminary Information Package for the Project in November 2006, the NEB issued a federal coordination notification letter (FCN Letter), pursuant to section 5 of the CEA Act's *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements* (Federal Coordination Regulations), to identify the potential involvement of federal departments in the EA process. The responses are summarized below:

Responsible Authorities (RAs)	Federal Authorities (FAs) in Possession of Specialist or Expert Information or Knowledge
Transport Canada*(TC) Indian and Northern Affairs Canada	Environment Canada (EC) Department of Fisheries and Oceans** (DFO) Natural Resources Canada Health Canada (HC)

*Transport Canada advises that it considers itself an RA until it makes the decision as to whether it may issue any approvals under the *Navigable Waters Protection Act* (NWPA) or the NEB Act. TC also stated that it intends to limit its involvement in the environmental assessment process to those components of the Project for which it has a likely CEA Act trigger, i.e. NWPA Section 5(1) or NEB Act Section 108 approval of the watercourse crossing at Oak Creek.

**DFO stated that it will not be commenting on the proposed broad scope of the project and will instead identify a scope of project that meets its responsibilities pursuant to the *Fisheries Act* and CEA Act and that directly relates to effects to fish and fish habitat resulting from construction of the pipeline. DFO stated that it will undertake a screening level assessment pursuant to CEA Act and the scope of project for the purposes of the DFO assessment will be associated with the water body crossings where Authorizations pursuant to the *Fisheries Act* are necessary.

The FCN Letter was also sent to provincial agencies in AB, Saskatchewan (SK) and MB. Saskatchewan Environment and Manitoba Conservation (MC) expressed interest in monitoring or participating in the EA process.

3.2 Feedback from the Public Including Government Agencies and First Nations

3.2.1 Submissions to the Board

Throughout the course of the EA process, the Board received several submissions pertaining to Project-related EA matters. The areas of primary concern are listed within Section 7.2 of this ESR.

3.2.2 Draft Scope of the EA

In mid-March 2007, the NEB sent a letter to RAs, FAs and interested provincial agencies inviting comments on the draft scope of the EA for the Project. Further, at the end of April 2007 the NEB, pursuant to subsection 18(3) of the CEA Act, conducted a public comment exercise on the scope of the EA including posting of the draft scope on the Canadian Environmental Assessment Registry for public comment.

3.2.3 NEB Hearing

Public oral hearings for the Project, pursuant to Hearing Order OH-3-2007, were held on three occasions: 13-14 August in Calgary, AB, 20-21 August in Regina, SK and 29 and 31 October in Calgary.

3.2.4 Draft ESR

On 13 December 2007, the NEB sent a letter to interested parties inviting comments on the draft ESR. Further, the draft ESR was posted on the Canadian Environmental Assessment Registry for public comment. A brief summary of public comments is provided in Section 7.3 and revisions were made to the ESR, as appropriate.

4.0 SCOPE OF THE ENVIRONMENTAL ASSESSMENT

The Scope of the Environmental Assessment (Scope) is composed of three parts:

1. Scope of the Project;
2. Factors to be Considered; and
3. Scope of the Factors to be Considered.

The Scope, as determined by the RAs in consultation with the FAs and the public, is included in Appendix 1 of this ESR and provides detailed information on these three parts. Appendix 1 includes a letter which provides the rationale for not making any changes in response to two submissions received from the public.

For this Project, the term "alternative means", as mentioned in Section 2.2 of the Scope, primarily refers to alternative routing options for the LSr Pipeline. These routing options are discussed in Section 9.1 of this ESR. Alternative construction methodologies (*e.g.* at watercourse crossings) are also considered within the context of alternative means.

Section 5.0 of this ESR expands upon the "Scope of the Project" and incorporates any updates and revisions made to the Project by the Applicants since the Scope was determined in June 2007.

5.0 DESCRIPTION OF THE PROJECT

Sections 5.1, 5.2 and 5.3 provide information for each Project component throughout the three phases of the Project: construction, operations and abandonment. Map 1 specifies the geographic location of the facilities involved.

5.1 Construction Phase

	Physical Works and/or Activities

LSr Pipeline
▪ Proposed pipeline Construction date: August/ fall 2008
	pipeline
	▪ Construction of a 288 kilometre (km) long, 508 millimetre (mm) outside diameter LSr Pipeline between Cromer, MB and the Canada/US Border
	▪ Approximately 260 km of the LSr Pipeline would be constructed within or adjacent to EPI's existing RoW in MB
	  ▪ The existing RoW, comprised of five pipelines 1, 2, 3, 4 and 13 varies in width; EPI proposes to achieve a consistent RoW width of 36.6 metre (m) after the completion of the LSr Pipeline; 110 km of existing RoW would not require any new permanent land; temporary workspace requirements would be approximately 22 m in width
	▪ Approximately 28 km of an 18.3 m wide RoW for the LSr Pipeline would be constructed outside of EPI's existing RoW in MB
	  ▪ 7.9 km of new RoW would be required east of the Souris River Valley
	  ▪ Approximately 20 km of new RoW at 10 locations
	▪ Approximate land area requirements: 377 hectares (ha) of permanent RoW and 697 ha of temporary work space

	Physical Works and/or Activities
	▪ Temporary workspace may be required at road, rail, foreign line, water crossings, areas where heavy grading is required, shoo-flies/access roads, equipment storage sites, pipe stockpile sites, bone yards, borrow pits and construction office sites ▪ Road and railway crossings would generally be bored ▪ Required activities would include some clearing, topsoil salvage, grading, trenching, backfilling, clean-up and reclamation; blasting may be required where bedrock is encountered ▪ Pressure testing using water in non-frozen conditions and either hot water or a water-methanol mixture during frozen conditions; test water would be disposed of in accordance with applicable regulatory requirements ▪ Several crossing methods would be used during watercourse construction such as isolation (e.g., dam and pump, flume), horizontal directional drill, bore and open cut ▪ Pipeline would be protected with cathodic protection ▪ 12 block valve sites would be installed within the LSr Pipeline RoW ▪ Minimum depth of cover in soil: 0.9 m of subsoil *LSr Station Facilities* ▪ At each of three existing pump stations*, EPI would install electrically-driven pump units and electrical services buildings. Scraper trap facilities and a new drag reducing agent (DRA) injection unit would be installed at Cromer
Line 2 Modifications ▪ Proposed Construction date: 2008	▪ Installation, relocation or recommissioning of DRA injection units at 22 existing pump stations* ▪ Pump and motor modifications, replacements and/or installations at 17 existing pump stations * ▪ No new lands or RoW are required ▪ Hydrostatic testing may be conducted

Line 13 Reversal
▪ Timeframe: July 2009 to June 2010
	▪ Modifications to piping at 17 existing pump stations *
	  ▪ Existing pumps would be reversed at all stations except Edmonton where pumps would be idled
	  ▪ Installation of DRA injection units at four existing pump stations
	▪ Installation of delivery metering and connections at three existing pump stations
	▪ Modifications to four existing scraper traps within existing pumping stations
	▪ Modifications to six existing check valves along Line 13
	▪ No new lands or RoW are required
	▪ Hydrostatic testing may be conducted

*** See Appendix 2 for the Locations of the Pump Stations**

5.2 Operations Phase

The LSr Pipeline is expected to be in service upon completion of construction and the facilities associated with the Line 2 Modifications are expected to be in service prior to or within that timeframe. Line 13 is expected to be in diluent service by mid-2010. The service life of the Project, as a whole, is anticipated to extend beyond 50 years.

The following outlines information related to the Operations phase of the various components of the Project:

LSr Pipeline

- Regular aerial and ground line patrols to inspect for environmental monitoring issues, damage to pipe or permanent erosion control structures, RoW encroachments, exposed pipe, erosion/ wash-out areas and sparse vegetation; pipeline markers and signs would also be inspected
- Running regular in-line inspection tools to identify integrity problems
- Maintenance digs, as necessary

Line 2 Modifications, Line 13 Reversal, and LSr Station Facilities

- Regular inspections of permanent facilities such as pump stations; scraper traps would be inspected at least once per week
- Vegetated areas around permanent facilities would be periodically mowed and gravel may be occasionally added to the sites and on access roads
- There are no process combustion sources associated with the pipeline system and all pumps are driven by electric motors
- New and modified existing pumps and motors would be in compliance with the requirements of the Alberta Energy and Utilities Board's Noise Directive 038[3], hereinafter referred to as ERCB Directive 038: Noise Control
- EPI has a groundwater monitoring system at all but eight pumping stations; the Applicants have committed to installing groundwater monitoring systems at the eight remaining stations in the first year after the Project construction is completed

5.3 Abandonment Phase

At the end of the service life of the Project, an application pursuant to paragraph 74(1)(d) of the NEB Act would be required for its abandonment, at which time the environmental effects of the proposed abandonment activities would be assessed by the NEB under both the NEB Act and the CEA Act. It is anticipated that many of the effects associated with abandonment would likely be similar to those associated with construction or operation of the Project.

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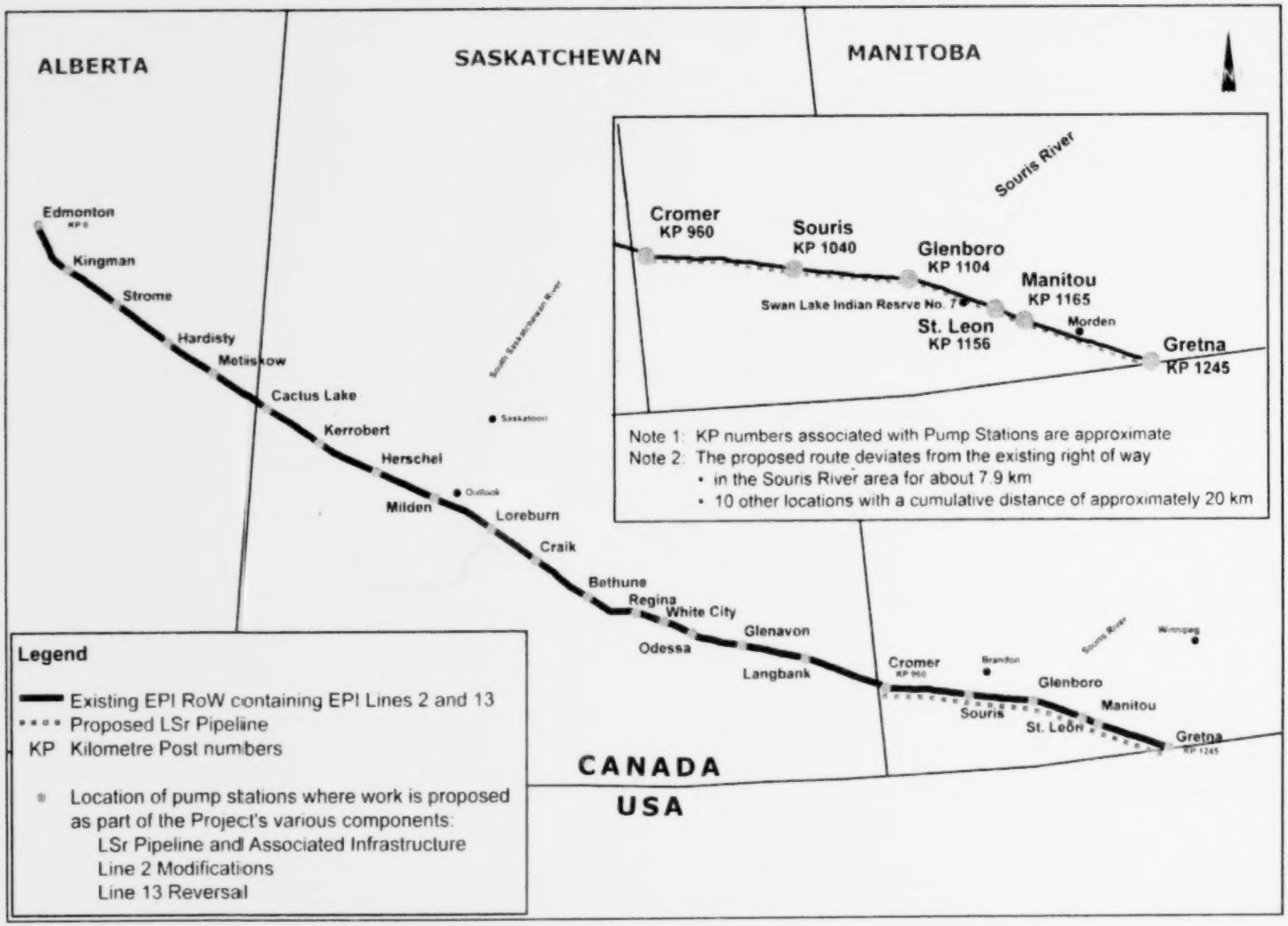
[3] Effective 1 January 2008, the Alberta Energy and Utilities Board was realigned into two separate regulatory bodies, the Energy Resources Conservation Board (ERCB), which regulates the energy industry, and the Alberta Utilities Commission, which regulates the utilities industry. Consequently, the title of this Directive has been changed to "ERCB Directive 038: Noise Control".

Map 1

Southern Lights Project



6.0 DESCRIPTION OF THE ENVIRONMENT

6.1 LSr Pipeline Route

The description of the environment is based on information contained in a number of sources including:

- literature reviews;
- field studies performed for the EPI Terrace Phase 1 project, pertaining to soils, wildlife and vegetation, dating back to the 1990s;
- field studies (done mainly in 2006) in areas where:
  - areas deviated from the Terrace Phase 1 route,
  - the LSr Pipeline route segments did not form part of Terrace Phase 1 project, and
  - areas of known environmental importance in the vicinity of the LSr Pipeline route based on the results completed for Terrace Phase 1; and
- detailed surveys for a number of disciplines such as soils, wildlife, rare plants, fish, and wetlands, undertaken in 2007 for those areas where there were known knowledge gaps from previous field work.

The spatial extent of the detailed field surveys varied depending on the discipline. For example, wildlife and wildlife habitat surveys were conducted along segments of the proposed pipeline route that traverse native vegetation such as native prairie, bush and bush-pasture greater than 100 m in length, soil surveys were undertaken on previously non-surveyed areas, and weed surveys were performed over virtually the full length of the LSr Pipeline route.

EPI stated that the objectives of its field surveys included: the identification of species or issues; developing a description of habitat; and/or assisting with the development of practical and effective mitigative measures.

As EPI was not able to access all areas for the detailed surveys in 2007, EPI has committed to undertake surveys in 2008 and has stated that it would complete and submit the survey results to the NEB and other appropriate agencies prior to construction. Regarding some surveys such as the late summer rare plant surveys, EPI stated that the results would be submitted to the NEB and appropriate agencies 10 days prior to construction in those areas where the surveys were performed. EPI has conducted a number of late summer rare plant surveys along various segments of the LSr Pipeline route totaling approximately 20 km and has committed to conduct additional surveys in 2008 totaling approximately 10 km.

Land Use

- Land use along the proposed route consists of 68.4% cultivated land, 11.6% hay land, 9.9% pasture, 4.5% bush and bush/pasture, 5% native prairie and the remaining 0.6% disturbed lands.
- Existing infrastructure and activities in the area include oil and gas activity, roads, rail lines, agriculture, power lines and wind farms. Proposed projects include EPI's Alberta

Clipper Expansion (Alberta Clipper), Southern Access and Line 4 Extension projects, TransCanada's Keystone Pipeline Project and various wind generation projects.

Terrain and Soils

- Flat to rolling terrain; steep slopes are encountered at the valleys associated with some of the watercourse crossings (*e.g.* Deadhorse Creek).
- No bedrock within trench depth was encountered during recent soil surveys.
- The proposed route does not encounter any areas of permafrost or earthquake-prone areas.
- Much of the proposed route traverses clay-textured soils prone to rutting and compaction during wet conditions; coarse-textured soils are also commonly encountered and are prone to trench sloughing and wind erosion.
- Soils on native prairie land are susceptible to rutting and sod/soil pulverization.
- Approximately five percent of the proposed route encounters saline and/or sodic soils.
- Known site of contamination at KP 1154.8 and other sites along the proposed route where there have been spills and leaks during past farming activities on cultivated and hay lands. (Refer to Section 9.3.1.1, under the heading, "Discovery of existing contaminated soils" for details on this issue.)

Fish and Fish Habitat

- A total of 26 watercourses would be crossed by the proposed LSr Pipeline. In addition, 17 drainages with undefined channels and limited fisheries value were identified along the proposed route.
- Ten of the moderate and larger watercourses along the route have the potential to support spring spawning sports fish; 23 species were captured during sampling and there are 20 additional species that could be potentially present.
- The Souris River is anticipated to exhibit year-round stream flow; however, many of the other watercourses crossed by the proposed route may be dry, frozen to the bottom or reduced to negligible flows during the winter.

Aquifers

- There are 17 sand and gravel aquifers along the proposed route. The following four aquifers would be crossed by the proposed LSr Pipeline route: Oak Lake (KP 975 to 1034), Assiniboine Delta (KP 1080 to 1110), Winkler (KP1207 to 1219), and an aquifer with a high groundwater table near the Swan Lake Indian Reserve No. 7.

Wetlands

- The proposed route crosses 83 km of wetland habitat, with less than 1 km crossing shallow open water wetlands and 82 km crossing low-lying prairie and wet meadow wetlands.
- Wetland areas with special conservation status include: the Oak Lake/Plum lakes, Important Bird Area (KP 987.0 to 1004.0); a Game Bird Refuge (KP 984.9 to 990.1); two Ducks Unlimited wetland projects (KP 1052.0 to 1053.7 and KP 1174.3 to 1174.8); two Manitoba Habitat Heritage Corporation (MHHC) Conservation Agreement areas (KP 1052.1 to 1052.9 and KP 1056.2 to 1057.0); and two North American Waterfowl Management Plan designated priority areas (KP 960.0 to 977.1 and KP 1052.0 to 1063.0).

Vegetation

- Most of the lands along the proposed route have been broken or cleared for agricultural purposes; however, remnant native vegetation (ranging from fescue grasslands to trembling aspen and/or bur oak forests) can be found on soils unsuitable for farming or where topographic constraints would restrict farming practices.
- A total of 70 weeds of concern were observed along the segments of the proposed route surveyed in 2007.
- Approximately 131 ha of native vegetation consisting of 59 ha of native prairie and 72 ha of bush and bush-pasture would be disturbed or cleared during construction.

Air Quality

- The proposed route is located in an area that is relatively undisturbed by industrial and commercial development which contributes to a high baseline air quality.

Wildlife and Wildlife Habitat

- The ecoregion also provides a major breeding habitat for waterfowl and includes habitat for white-tailed deer, coyote, snowshoe hare, cottontail, red fox, northern pocket gopher, ground squirrel black bear, moose, beaver, rabbit and bird species like sharp-tailed grouse, black-billed magpie and ruffed grouse.

Species at Risk, as listed on Schedule 1 of the Species at Risk Act (SARA)

- Lands in the vicinity of the proposed route may support the preferred habitat for the following 15 species listed on Schedule 1 of SARA: silver chub, hairy prairie clover, western spiderwort, small white lady's slipper, prairie skink, piping plover, grey fox, least bittern, loggerhead shrike, peregrine falcon, Sprague's pipit, Dakota skipper, yellow rail, northern leopard frog, and monarch butterfly.

- Sprague's pipit and monarch butterfly were the only SARA species observed within the footprint of the proposed route during the 2007 surveys; northern leopard frog and peregrine falcon have been previously identified along the proposed route.
- Although maple leaf mussel, which is scheduled to be added to Schedule 1 of SARA, has documented occurrences in the Assiniboine River, it was not present in samples collected from the Souris River at the LSr Pipeline crossing.

Species of Concern (Species that are listed in SARA, other than on Schedule 1, and other federally/provincially listed species)

- Lands along the proposed route may support the preferred habitat of about 30 wildlife and fish species and approximately 85 vegetation species that are listed in SARA, other than on Schedule 1, or otherwise federally/provincially listed.
- American bittern, black tern, grasshopper sparrow, red-tailed hawk, short-eared owl and Swainson's hawk were species of concern observed within the footprint of the proposed route during 2007 surveys and plains spadefoot toad, red-headed woodpecker, smooth green snake, snapping turtle, merlin, sprey and double-crested cormorant were observed in previous surveys.
- Based on the 2007 surveys, the following vegetative species of concern were observed: golden bean, sand bluestem, Schweinitz's flatsedge, and Nuttall's sunflower. Yellow Indiangrass, an uncommon species but not listed as rare in MB, was also observed. Seneca root was observed in previous surveys.

Socio-Economic

- Approximately 0.9 km of the proposed route traverses Swan Lake Indian Reserve No. 7 and is used for hay production.
- There are 537 water wells in the quarter sections traversed by the proposed route which are mainly used for domestic and livestock purposes.

Heritage Resources

- There are 18 previously recorded archaeological sites in the general vicinity of the proposed route including the Thornhill Burial Mounds.
- A number of areas along the proposed route have been identified as having high potential for containing historical resources.

Current Traditional Land and Resource Use

- The proposed LSr Pipeline traverses Treaty No. 1, Treaty No. 2, Treaty No. 4 and Treaty No. 6 lands as well as lands claimed by Dakota First Nations and Métis people as traditional territory.

6.2 Pump Stations for all Three Project Components and Six Check Valve Sites on Line 13

The following description is representative of all existing pump stations and the six check valve sites on Line 13 where work would be conducted as part of the Project. All work would be conducted within the confines of each facility.

- Previously disturbed, fenced industrial sites
- Lacking topsoil, vegetation and suitable habitat for wildlife (including for species at risk)
- With the exception of Edmonton, AB, there are no watercourses within any of the station sites
- Other than at Craik and Glenavon, SK, there are no wetlands within 30 m of the station sites
- The pump stations are currently sources of ongoing operational noise; however, noise from pumps and motors comply with ERCB Directive 038: Noise Control

7.0 COMMENTS FROM THE PUBLIC RELATED TO ENVIRONMENTAL AND SOCIO-ECONOMIC MATTERS OF THE PROJECT

7.1 Project-Related Issues Raised through Consultation Conducted by the Applicants

During the preparation of its Environmental and Socio-Economic Assessment for the Project, the Applicants consulted with a number of sources including the general public, landowner associations and federal, provincial and local government agencies. This information contributed to the identification of potential adverse environmental effects, issues of concern and the development of mitigation measures. The majority of issues and questions raised through the consultation efforts were resolved by the Applicants throughout the course of its application process. Some issues were also raised through submissions directly to the Board and those issues are included in Section 7.2.

7.2 Project-Related Issues Raised in Comments Received by the NEB

Several submissions from the public, landowner associations and various levels of government were received by the Board. They outlined a number of potential environmental effects. Those effects were categorized by environmental elements as outlined below.

Environmental Element of Interest	Interested Party		
	Government Agencies (federal, provincial, regional, local)	Public: (Individuals, Landowner associations, conservation groups)	Aboriginal Groups
Wildlife	X		
Species at Risk	X		
Wetlands	X		
Fish and Fish habitat	X		
Vegetation	X		
Soils	X	X	
Health	X		
Human Occupancy and Resource Use	X	X	
Heritage Resources			X
Current Traditional Land and Resource Use			X
Accidents and Malfunctions	X	X	
Cumulative Effects		X	

Information and concerns raised through the submissions have been incorporated within Section 9.0 of this Report.

7.3 Comments Received by the NEB on the draft ESR

Following the release of the draft ESR, a number of comments were received from EC, HC, TC, INAC, DFO, MC, Manitoba Water Stewardship (MWS), and Manitoba Intergovernmental Affairs (MIA). The Applicants also provided comments, including responses to a number of the comments made by the various government agencies.

Appendix 3 provides a summary of the comments, some of which resulted in wording changes to the ESR. Explanations have been included for those comments that did not result in changes to the ESR.

The Board has also made minor wording changes within the ESR for clarity and consistency.

Regarding its involvement with the CEA Act process, INAC stated that it may decide to conduct its own environmental screening report which would be limited to the scope of INAC's mandate or jurisdiction (Swan Lake Reserve land), by using the information provided in the NEB's ESR.

8.0 THE NEB'S ENVIRONMENTAL ASSESSMENT METHODOLOGY

In assessing the environmental effects of the Project, the NEB used an issue-based approach. Alternative LSr Pipeline routing considerations are discussed in Section 9.1. In its analysis within Section 9.2, the NEB identified interactions expected to occur between the proposed project activities and the surrounding environmental elements. Also included were the consideration of potential accidents and malfunctions that may occur due to the Project and any change to the Project that may be caused by the environment. If there were no expected

element/Project interactions, then no further examination was deemed necessary. Similarly, no further examination was deemed necessary for interactions that would result in positive or neutral potential effects. In circumstances where the potential effect was unknown, it was categorized as a potential adverse environmental effect.

Section 9.3.1 provides an analysis for all potential adverse environmental effects that are normally resolved through the use of standard design or mitigation measures. In Section 9.3.2, the Board has identified certain potential adverse environmental effects for detailed analysis based on public concern or the use of non-standard design or mitigation measures. Appendix 4 specifies the ratings for criteria used in evaluating significance.

Section 9.4 provides discussion on inspection while Section 9.5 addresses cumulative effects. Section 9.6 addresses follow-up programs and Section 9.7 lists recommendations for any subsequent regulatory approval of the Project.

9.0 ENVIRONMENTAL EFFECTS ANALYSIS

9.1 Routing of the LSr Pipeline

Routing of the new LSr Pipeline was influenced by EPI's desire to minimize the amount of new land disturbance, avoid any areas of high environmental sensitivity and maximize operational efficiency.

The proposed LSr Pipeline route parallels the existing EPI pipeline corridor for approximately 90% of its length.

In a letter of comment, EC recommended that the proponent provide an alternate route that would avoid major wetland complexes. Subsequently, EPI stated that it understood that the rerouting request was primarily based on concerns about potential spills as opposed to potential damage caused by construction. Section 9.3.2.2 outlines EPI's mitigation measures to address this issue.

EPI identified a number of route realignments which are areas where the proposed route deviates from the existing EPI corridor, which are discussed below.

9.1.1 Souris River Route Realignment

Due to the encroachment on a farm yard within the Souris River area, EPI deviated approximately 7.9 km from its existing corridor.

At this location, EPI identified two route alternatives:

- Route Alternate 1: approximately 7.4 km long, entailing new RoW for approximately 23% of its total length; there is slope instability along a portion of the route; the pipeline would cross a highway using a boring technique at one location.
- Route Alternate 2: approximately 7.9 km long and entails new RoW for its entire length; there are no slope stability issues along the route; the pipeline would cross a highway using a boring technique at two locations.

EPI selected Route Alternate 2 to avoid slope stability issues.

Manitoba Infrastructure and Transportation (MIT), in a letter of comment, stated that it preferred Alternate Route 1 because it minimized the number of highway crossings. MIT noted the following requirements: that provincial road and highway crossings shall be bored; that any disturbance to the RoW shall be repaired and returned to pre-existing conditions; and that erosion controls shall be used where, according to MIT, erosion potential is high. EPI has committed to meet these requirements.

9.1.2 Other Route Realignments

Additionally, EPI's proposed route deviates from the existing corridor at 10 locations along approximately 20 km of the proposed 288 km route. Reasons for these deviations include avoidance of wetlands, shelterbelts, burial grounds and/or existing infrastructure. The linear distance of the proposed realignments ranges from tens of meters to about 300 m.

EPI stated that no potential impacts were identified along the proposed realignments which have not been previously addressed in its application. EPI further stated that the proposed route realignments do not alter the conclusions with respect to the significance of environmental effects.

9.1.3 Views of the Board

The Board is of the view that paralleling the existing EPI corridor as much as possible minimizes the potential environmental effects. The Board finds that the proposal to widen an existing pipeline RoW would minimize environmental and socio-economic effects compared to constructing the project on lands previously undisturbed by pipeline activity. Further, pipeline surveillance and maintenance activities can be conducted more efficiently within a common RoW than for two RoWs that are geographically separated.

Regarding the Souris River route realignment, the Board is of the view that EPI's selection of Alternate Route 2 would minimize potential environmental effects due to the elimination of the slope instability noted for Alternate Route 1. Although the Board acknowledges MIT's preference of Alternate Route 1 since it involves only one road crossing, the Board is of the view that EPI's proposed use of standard boring techniques would have little to no effect on the ongoing operation of highways. However, prior to any boring operation, the Board would expect EPI to consult with MIT and work toward resolving outstanding issues that may arise.

Regarding the other route realignments referred to above, the Board is of the view that EPI's proposed routing is appropriate and would likely result in lesser environmental effects as the deviations avoid environmentally sensitive areas as identified by EC, address concerns raised by landowners, and avoid infrastructure such as houses, shelterbelts or oil and gas facilities. The Board notes that the subsequent NEB detailed route process could also be used to address outstanding routing issues, if necessary.

If the Project is approved, further deviations, changes or alterations to the applied-for route would require an application to the NEB.

9.2 Project – Environment Interactions

(The interactions are primarily associated with the LSr Pipeline: however, as indicated, some may also apply to pumping and valve stations)

	Environmental Element	Project Inter-action?	Description of Interaction (How, When, Where)	Type of Potential Effect(s)	Potential Adverse Environmental Effect	Mitigation Discussed in:	
						Section 9.3.1	Section 9.3.2
Bio-Physical	Terrain stability	Y	• Clearing, grading, excavation and backfilling along the RoW	Adv	• Terrain instability	X	
	Soil and Soil Productivity	Y	• Clearing, grading, excavation and backfilling along the RoW and pump stations • Use of construction equipment and vehicles	Adv	• Soils capability (surface/sub-soil mixing, soil erosion, saline soils, presence of stones in sub- and top soil, pulverization, compaction, wet conditions) on ○ Non-agricultural lands ○ Agricultural lands • Discovery of existing contaminated soils	 X X	 X
	Vegetation	Y	• Clearing, grading, excavation and backfilling along the RoW • Use of construction equipment and vehicles	Adv	• Alteration/disturbance of native prairie • Alteration of vegetation important to wildlife • Introduction/spreading of weeds on the LSr Pipeline RoW • Loss of ornamental trees, windbreaks and shelterbelts	X X X X	
	Water Quality and Quantity	Y	• Clearing, grading, excavation, backfilling and blasting along the RoW • Hydrostatic testing of pipelines	Adv	• Alteration of natural drainage patterns • Reduction in surface water quality • Disruption of water well flows • Disruption of springs	X X X X	
	Fish and Fish Habitat	Y	• Clearing, grading, excavation and backfilling at stream crossings along the RoW • Use of equipment and vehicles during construction and operations	Adv	• Fish mortality and the disturbance or alteration of fish habitat, resulting from ○ Disturbance of riparian vegetation ○ Alteration of instream habitat ○ Increased suspended solid concentrations during instream construction ○ Blockage of fish movements ○ Contamination from spills ○ Bank instability at the crossing sites leading to bank erosion	X	

	Environmental Element	Project Inter-action?	Description of Interaction (How, When, Where)	Type of Potential Effect(s)	Potential Adverse Environmental Effect	Mitigation Discussed in:	
						Section 9.3.1	Section 9.3.2
	Wetlands	Y	• Clearing, grading, excavation and backfilling at stream crossings along the RoW • Use of equipment and vehicles during construction and operations	Adv	• Alteration of wetlands (habitat, hydrologic and/or water quality function)	X	
	Wildlife and Wildlife Habitat	Y	• Clearing, grading, excavation and backfilling along the RoW and some pump stations • Use of equipment and vehicles during construction and operations	Adv	• Alteration of wildlife habitat • Sensory disturbance and/or displacement of wildlife • Mortality due to vehicle/wildlife collisions on access roads and along the RoW • Mortality due to the physical disturbance of undiscovered nests, burrows, dens or other localized habitat on the RoW	X X X X	
	Species at Risk (federal)	Y	• See wildlife, vegetation and fish elements	Adv	• Disturbance, alteration of habitat and /or mortality or destruction to species at risk (wildlife, fish and/or vegetation)	X	
	Species of Special Status (provincial, territorial, local)	Y	• See wildlife, vegetation and fish elements	Adv	• See wildlife, vegetation and fish elements	X	
	Air Quality	Y	• Clearing, grading, excavation and backfilling along the RoW • Use of equipment and vehicles during construction and operations • Operations at pumping facilities: space heating of buildings; fugitive or process emissions	Adv	• Vehicle Equipment Emissions • Dust • Smoke from burning of slash • Trace levels of greenhouse gases	X X X X	
Socio-Economic	Human Occupancy/ Resource Use	Y	• Clearing, grading, excavation and backfilling along the RoW • Use of equipment and vehicles during construction and operations	Adv	• Disturbance to agricultural and ranching operations	X	
	Heritage Resources	Y	• Clearing, grading, excavation	Adv	• Disturbance/destruction of heritage resources	X	
	Current Traditional Land and Resource Use	U	• Clearing, grading, excavation and backfilling along the RoW • Use of equipment and vehicles during construction	Adv	• Loss or alteration of traditional sites • Disruption or inability to carry on traditional activities	X X	

	Environmental Element	Project Inter-action?	Description of Interaction (How, When, Where)	Type of Potential Effect(s)	Potential Adverse Environmental Effect	Mitigation Discussed in: Section 9.3.1	Mitigation Discussed in: Section 9.3.2
	Socio and Cultural Well-being	N					
	Human Health/ Aesthetics	Y	• Use of equipment and vehicles during construction and operations • Ongoing operation of pumping facilities	Adv	• Loss of enjoyment of property or human health effects caused by noise	X	
Other	Accidents/ Malfunctions	Y	• Clearing, grading, excavation and backfilling along the RoW and pump stations • Use of equipment and vehicles during construction and operations • Potential release of hydrocarbons from the LSr Pipeline and Line 13 during operations	Adv	• Contamination of wetlands and aquifers caused by an accident or malfunction of the LSr Pipeline during operations • Contamination of the South Saskatchewan River caused by an accident or malfunction of Line 13 • Soil contamination from a rupture or leak due to pipeline failure during operations • Water or soil contamination due to spills of hazardous materials during construction • Rupture of, or damage to foreign lines, EPI's existing pipelines and cables during construction • Effects on fish and fish habitat due to a release of drilling mud during horizontal directional drilling • Fire during construction	X X X X X	X X
	Effects of the Environment on the Project	Y	• Slumping • Flooding • Wildfires • Severe weather	Adv	• Delay of construction • Affect the operations of the Project • Damage to infrastructure	X X X	

Legend: Y (Yes); N (No); U (Uncertain); P (Positive); Nil (Neutral); Adv (Adverse)

☐ Bio-Physical; ☐ Socio-Economic; ☐ Other

9.3 Potential Adverse Environmental Effects

To address potential adverse environmental effects, the Applicants have proposed several mitigation strategies to avoid or minimize the effects of the Project, including avoidance through route selection; scheduling of activities to avoid sensitive periods; developing mitigation measures, including contingency plans, to address site-specific and general issues; inspection during construction to ensure mitigation is implemented and effective; and maintenance activities during the operation of the pipeline system. The reader is referred to the Applicants' application and supporting documentation for details on all the mitigation proposed by the Applicants. These measures have provided the Board with a sufficient basis to assess the potential adverse environmental effects associated with the Project and meet the objective of mitigating potential adverse environmental effects.

As noted in Section 8.0 of this Report, the analysis of potential adverse effects has been categorized into two streams: Section 9.3.1- Analysis of Potential Adverse Environmental Effects to be Mitigated through Standard Measures, and Section 9.3.2 - Detailed Analysis of Potential Environmental Effects. Note that the "Views of the Board" are provided for each of the environmental effects discussed in Section 9.3.2; whereas, the Views presented in Section 9.3.1 encompass the remaining potential adverse environmental effects identified in Section 9.2. Both sections identify recommendations in the event that regulatory approval is granted for the Project.

Field Surveys

In its application, EPI noted that a number of field surveys would be undertaken in 2007. Subsequently, EPI informed the Board that some of these surveys could not be completed until 2008, including several that would be conducted close to the start of construction.

EPI stated that for any survey reports that are submitted to the NEB after the filing of its Environmental Protection Plan (EPP) which is discussed in Section 9.4, it has mechanisms in place to ensure that updated information from these surveys would be communicated to the appropriate staff in the field. EPI also stated that federal and provincial agencies would be consulted regarding mitigation for any discoveries made during any of the environmental surveys.

EPI stated that while some biophysical field survey reports would be submitted by mid-July, late summer rare plant survey results would not be available until early August. In some instances EPI has requested permission to commence construction as soon as 10 days subsequent to the filing of the site-specific survey reports. EPI stated that it would submit the results of these outstanding studies to the NEB prior to the commencement of the LSr Pipeline construction for these site specific areas.

Views of the Board

The Board notes that it would be more effective if mitigation measures from the surveys were encompassed in one complete EPP as opposed to having a number of supplementary attachments. The Board also notes that completion and submission of field

surveys 10 days prior to construction is not optimal and could affect the quality of the surveys and mitigation strategies due to time constraints. The Board further notes that while EPI intends to undertake and submit a number of biophysical surveys by mid-summer of 2008, it is possible that due to weather or unforeseen circumstances, the surveys may be delayed thereby increasing the number of surveys being submitted 10 days prior to construction in those surveyed areas.

The Board acknowledges that although EPI's contingency plans filed in the application would likely result in effective mitigation for any species discovered, site-specific mitigation would not be known until surveys are completed.

To ensure that appropriate mitigation strategies would be in place and effectively communicated, upon receipt of any survey reports after the filing of the EPP, it is recommended that, as appropriate, meetings with EPI and Board staff take place prior to the commencement of construction within these site-specific areas to discuss its survey findings, proposed mitigative measures and the results of its consultations with other agencies. In its comments on the ESR, EC stated that it concurs with the Board's position that the results of the surveys must be evaluated, and mitigation strategies committed, prior to the commencement of construction.

9.3.1 Analysis of Potential Adverse Environmental Effects to be Mitigated through Standard Measures

9.3.1.1 Analysis

The Applicants have identified standard design and mitigation measures for all the potential environmental effects that were categorized in Section 9.2 as fitting into this analysis stream.

The following table provides discussion on the potential adverse environmental effects and associated standard mitigation that have been the subject of comments received by the NEB, for which the NEB required further information from the Applicants, or which involve the Applicants' commitments to other federal and provincial departments or agencies.

Potential Adverse Environmental Effect	Notes
Discovery of existing contaminated soils	▪ EPI has an existing 'Contaminated Soil Management Procedure' in place which addresses: o contamination identification; o initial response (*e.g.*, notification of company and government contacts); o soil handling and temporary storage; o erosion control; o soil sampling and testing; o disposal; and o documentation. ▪ EPI committed to remove and replace contaminated soils encountered during construction with clean soil, in a manner that meets or exceeds the applicable regulatory criteria.
Introduction/spreading of Weeds on LSr Pipeline RoW	▪ Leafy spurge is the primary weed of concern by the public, including government agencies. ▪ EPI stated that weeds of management concern according to the *Manitoba Weeds of Concern Act* and *Weeds of Concern Regulation* were reviewed prior to field reconnaissance. ▪ EPI has committed to undertake a weed survey prior to construction and, as outlined in Section 9.3.1.2, the Board recommends that EPI undertake a five-year post-construction monitoring program to monitor various environmental issues including weeds. ▪ EPI stated that any problematic areas noted during the post-construction monitoring program period would be controlled (e.g., hand picking, mowing or spraying), as deemed appropriate by EPI, the municipal agricultural weed specialist and landowners. ▪ Pursuant to Schedule 4 of the Manitoba Pipeline Landowners Association/ Saskatchewan Association of Pipeline Landowners (MPLA/SAPL) – EPI agreement which is explained in more detail in Section 9.3.2, EPI has committed to an additional weed management plan which applies to MPLA/SAPL members' lands affected by the Project.

Potential Adverse Environmental Effect	Notes

Fish mortality and the disturbance or alteration of fish habitat	• EPI has identified:
	  ○ the locations of crossings;
	  ○ species that are or could be present;
	  ○ vehicle and pipeline crossing techniques; and
	  ○ mitigation measures.
	• EPI has undertaken 2007 fish surveys and has committed to undertaking further fish surveys in 2008, all of which would be submitted in a report to the NEB, DFO and MC.
	• EPI stated that it is maintaining ongoing consultations with DFO and MWS regarding: Operational Statements; horizontal directional drilling crossings and DFO authorizations and potential for compensation in the event of a harmful alteration, disruption or destruction of fish habitat; and a final list of proposed watercourse crossings.
	• EPI stated that it would adhere to all approvals, permits and authorizations issued by regulatory authorities and that any alternatives or alterations to crossing requirements specified in approvals, permits and authorizations must be approved prior to the commencement of crossing construction.

Alteration of wetlands (habitat, hydrologic and/or water quality function)	• EPI stated that it is developing a Wetland Characterization and Wetland Compensation Proposal to address temporary loss of wetland function arising from construction of the LSr Pipeline. Upon completion, EPI plans to provide copies of the proposal to EC and applicable provincial agencies for their review. When finalized, the goal is to have one plan in place to address wetland compensation for temporary loss of wetland function that would satisfy all parties. • EPI stated that it will form a joint EPI/EC committee to address post-construction monitoring program of wetlands. In its comments on the ESR, EC stated that it is satisfied with the current ongoing process with EPI to redress permanent and temporary loss of wetland function.
Sensory disturbance and/or mortality of wildlife	• The Applicants stated that it would respect setback distances and timing restrictions other than in circumstances where it has listed criteria to compensate for not meeting those restrictions and would consult with appropriate agencies as required.

Potential Adverse Environmental Effect	Notes
Disturbance, alteration of habitat and /or mortality or destruction to species at risk (wildlife, fish and/or vegetation)	▪ EPI has submitted 2007 surveys and will be submitting 2008 field surveys to appropriate agencies, including a bi-valve study of the Souris River. Although the maple leaf mussel is not yet added to Schedule 1 of SARA, EPI would verify the presence of this species in the Souris River. ▪ EPI stated that EC is satisfied with the survey protocol regarding the appropriateness of the wildlife and rare plant survey methodology in relation to length of native vegetation and pasture. ▪ EPI anticipates that any discoveries made in the 2008 surveys would be similar to those found in prior surveys; however, in the event of a new discovery, EPI has committed to consult with appropriate federal and provincial agencies to confirm the suitability of proposed mitigation associated with the new discovery. ▪ EPI has "species of concern discovery contingency plans" for fish and bivalves, plants and wildlife. ▪ EPI stated that any additional information gathered from surveys, including identifying gaps that would be covered by future field surveys, would be incorporated into one document for use by key environmental construction field personnel. ▪ EPI stated that there is a program mechanism in place so that any information from field surveys undertaken 10 days prior to construction will be conveyed to the key personnel.
Alteration/disturbance of native prairie	▪ Full trench and work lane stripping would occur for the majority of the RoW that goes through native prairie to avoid the high potential for rutting and pulverization of the topsoil/sod. ▪ For localized areas where the construction RoW would be inaccessible to traffic by rubber-tired vehicles and where no grading is required, stripping would be reduced to blade width. ▪ EPI would ensure lands with native vegetation are seeded with native seed mix. ▪ EPI would avoid the use of highly invasive species on adjacent non-native prairie lands. ▪ EPI's reclamation efforts would include reducing the total area of disturbance and returning the RoW to as-near pre-construction conditions as feasible within a practical time frame.
Disturbance to agricultural and ranching operations	▪ EPI would provide notification to farmers and compensation for crop loss. ▪ In addition, post-construction monitoring may address some of these issues (refer to the Post-construction Monitoring Section 9.3.1.2 following this table).
Loss of enjoyment of property or human health effects caused by noise	▪ EPI would ensure compliance with ERCB Directive 038: Noise Control at all of the pump facilities. ▪ ERCB Directive 038: Noise Control is designed to maintain acceptable noise levels and to maintain quality of life for residents near energy industry facilities.

Potential Adverse Environmental Effect	Notes
Disturbance/destruction of heritage resources	▪ Should any previously unidentified heritage resources sites be encountered during construction of the Project, activity at that site would be stopped and the Heritage Resource Discovery Contingency Plan would be implemented. The site would be fully documented prior to resumption of construction activity. ▪ In addition to this standard mitigation, the Board recommends that EPI file with the Board the results of its archaeological and paleontological investigations and include the recommendations resulting from the archaeological and paleontological investigations, including those related to the Thornhill Burial Mounds. Further, the Board recommends that EPI: immediately cease work at the location of the discovery of any previously unidentified archaeological or heritage resources; notify responsible provincial authorities; and resume work only after approval is granted by the responsible provincial authority. (See recommendations 1 and 2 in Section 9.7 of this ESR.)
Loss or alteration of traditional sites	▪ EPI has indicated that its contingency plan, in the event that any Aboriginal interests were identified in the Project area, would consist of meeting with the Aboriginal organization or community that has identified an interest and to work with that community to jointly develop a course of action. ▪ In addition to this standard mitigation, the Board recommends that EPI file with the Board the results of the archaeological and paleontological investigations and include the recommendations resulting from the archaeological and paleontological investigations, including those related to the Thornhill Burial Mounds. Further, the Board recommends that EPI: immediately cease work at the location of the discovery of any previously unidentified archaeological or heritage resources; notify responsible provincial authorities; and resume work only after approval is granted by the responsible provincial authority. (See recommendations 1 and 2 in Section 9.7 of this ESR.)
Disruption or inability to carry on traditional activities	▪ No current traditional use of the lands along the proposed LSr Pipeline has been identified. The evidence indicates that EPI did consult with Aboriginal groups to establish whether they required traditional land and resource use studies. EPI has further indicated that its contingency plan, in the event that any Aboriginal interests were identified in the project area, would consist of meeting with the Aboriginal organization or community that has identified an interest and to work with that community to jointly develop a course of action.

Legend: ☐ Bio-Physical; ☐ Socio-Economic; ☐ Other

9.3.1.2 Post-construction Monitoring

As part of its overall mitigation, EPI has committed to undertaking a two-year post-construction monitoring program. The Board is of the view that this time frame may not be adequate to assess EPI's mitigation for a variety of environmental elements including but not limited to, soil productivity on cultivated lands, weeds, native prairie, and plant species of special concern along the LSr Pipeline. A longer monitoring time frame is required to deal with factors such as variable soil moisture conditions depending on annual climatic factors, variability of soil types encountered and variability of mitigation employed during construction. Regarding the latter,

environmental effects can vary in accordance with the construction techniques or mitigative techniques employed, some of which would not be chosen until the actual time of construction. An extended time frame would also provide a more adequate data set by which to assess the efficacy of EPI's mitigation. Therefore, it is recommended the Applicants undertake a five-year post-construction monitoring program as outlined in Recommendation (3) in Section 9.7. Further, such a program should outline EPI's methodology for assessing the effectiveness of its mitigation. In their comments on the ESR, EC and MWS stated that they concur with the Board's position for a five-year post-construction monitoring program.

9.3.1.3 Views of the Board

With respect to the potential environmental effects identified in Section 9.2, other than those that are dealt with individually in the following section (9.3.2), the NEB is of the view that if the Applicants:

- effectively implement the standard design and mitigative measures proposed in the application and subsequent submissions; and
- adhere to the commitments made during the oral public hearing and the recommendations outlined in Section 9.7 of the ESR,

these potential adverse environmental effects of the Project are not likely to be significant.

9.3.2 Detailed Analysis of Potential Adverse Environmental Effects

9.3.2.1 Potential Effects on Agricultural Soils Capability

Background/Issues	EPI outlined several potential adverse effects on agricultural soil capability as indicated in Section 9.2. Any of these effects in isolation or in combination could hinder future crop growth on cultivated agricultural lands if not properly mitigated. In its evidence and Information Requests of EPI, MPLA/SAPL raised concerns regarding Project effects on agricultural soils. In particular, MPLA/SAPL submitted that: ▪ The baseline soils information being relied on by EPI was not sufficient to adequately ascertain Project effects and mitigation ▪ EPI was inappropriately using the terms "soil capability" and "soil productivity" and that the terms are neither synonymous or proxies for one another. ▪ EPI had failed to identify potential effects associated with compaction and trench subsidence. ▪ EPI's proposed mitigation was not adequate, particularly as it related to trench subsidence and compaction. ▪ EPI's proposed post-construction monitoring program was not adequate to assess Project effects on soil capability. ▪ EPI's wet soil contingency plan was not adequate as suspension of construction activities was a "last resort" after considering other contingency measures and further, the descriptors used to determine when construction should halt were too subjective. ▪ EPI had not proposed the use of a landowner construction monitor to assist in possible support of landowner concerns in resolving any soils related issues that may arise during construction. ▪ Post-construction monitoring reports from previous EPI and other pipeline construction projects that EPI was relying on as proof of the effectiveness of its proposed soil mitigation measures were based on little objective data and much subjective observation. On 19 October, 2007, MPLA/SAPL filed with the Board a Settlement Agreement

	(Agreement) that they reached with EPI and indicated that they had resolved their issues with EPI. Included within this Agreement were numerous mitigation measures that EPI committed to implement during pipeline construction within its application as well as mitigation measures specific to the Agreement. EPI also responded to questions raised by the Board throughout the proceedings pertaining to soil erosion from stockpiled soil windrows, topsoil stripping and wet weather shutdown criteria.
Mitigation Measures	Within its application and subsequent submissions, EPI outlined mitigation for alleviating potential effects on soil capability. Much of this mitigation could be considered standard mitigation that is typically employed during large diameter pipeline construction and will not be repeated here. The following is a brief summary of issues pertaining to certain mitigative strategies that were raised by either MPLA/SAPL or the Board during the course of the proceedings. *Joint Committee/Independent Construction Monitor/Environmental Inspection* EPI stated that it would assign a minimum of one Lead Environmental Inspector per spread while construction activities are under way and that Assistant Environmental Inspectors would be assigned as necessary during key construction activities such as clearing, topsoil stripping, water crossing construction, and topsoil replacement and erosion control during rough clean up. Resource Specialists would also be employed as required during construction at certain environmentally sensitive areas. Pursuant to the Agreement, any issues relating to potential effects on soil productivity would also likely be addressed though the Independent Construction Monitor and the Joint Committee as outlined in the Agreement. For landowners not part of MPLA, EPI committed to looking at having non-MPLA/SAPL landowners represented on the Joint Committee as well. EPI further stated that any issues or concerns raised by non-MPLA/SAPL landowners would be addressed on a per person basis as EPI is made aware of any comments or concerns that those landowners may have. *Baseline Soils Information* EPI submitted that its soils surveys were adequate to characterize the soils which would be encountered along the proposed pipeline route as soil surveys provide an indication as to factors such as soil types and depths but there can still be substantial variability of these factors between data points. Localized effects related to previous pipeline construction or to natural variability would be at a scale too small to map and would be addressed on site by the Environmental Inspector. Further, EPI stated that post-construction monitoring for previous EPI projects along the proposed route did not indicate any extensive topsoil/subsoil mixing issues and therefore, additional soil surveys were not warranted along the segments of the proposed pipeline route that parallel the existing EPI pipeline corridor. *Compaction and Trench Subsidence* According to EPI, once compacted areas have been determined through a comparison of compaction levels on and off RoW, measures for alleviating compaction included but are not limited to ripping with a multishank ripper, employing a subsoiler plow, and general cultivation across the RoW. Backfill and compaction procedures would be developed during detailed engineering but EPI stated that it would undertake baseline bulk density testing off RoW prior to backfilling of the trench. The backfilled trench would be compacted to the extent feasible, using suitable equipment along the trenchline during non-frozen conditions. Alternative methods of compaction would be used if approved by EPI's engineer. Pursuant to the Agreement, EPI further committed to subgrade surface bulk density testing on the RoW prior to ditching and after backfilling with a view to restore the RoW ditchline to within 10% of the original subgrade surface baseline measurement. EPI committed to further subsidence mitigation such as regrading, restripping, and importation of topsoil, if necessary.

	Wet/Thawed Soils Contingency Plan EPI's wet/thawed soils contingency plan provides guidance as to when certain pipeline construction activities should be suspended due to wet or thawed soils. One concern that the Board noted with the plan was that there was a potential conflict between it and EPI's proposed criteria for progressively increased topsoil stripping widths found elsewhere in its application. It was not clear if EPI intended to undertake topsoil stripping operations even during excessively wet soil conditions. In its response to Board IR 1.24, EPI clarified that topsoil salvage operations would be suspended during excessively wet soil conditions. Pursuant to the Agreement, EPI has committed to three additional provisions to the wet/thawed soils contingency plan on MPLA and SAPL member lands: ▪ consideration of a plasticity of surface soil depth indicator; ▪ implementation of contingency measures prior to the occurrence of wet/thawed soils indicators if weather conditions are such that excessively wet/thawed soil conditions are likely to occur and ▪ all heavy traffic is to be suspended in excessively wet/thawed soil conditions where topsoil has been replaced. Further, according to the Agreement, the independent construction monitor would have input into the decision as to when to suspend activities in conjunction with EPI's Chief Inspector and Environmental Inspector.
Monitoring	EPI committed to undertaking a two year post-construction monitoring program to address and resolve any issues along the LSr Pipeline RoW.

Legend: ☐ Bio-Physical; ☐ Socio-Economic; ☐ Other

Views of the Board

The Board notes the MPLA/SAPL contention that the terms soil productivity and soil capability have been used inappropriately by EPI. It is recognized by the Board that there may be uncertainty associated with these terms and they may have different uses in different contexts. However, in previous post-construction assessments, the Board has accepted the use of soil productivity as an indicator of soil capability which is often measured in terms of equivalent crop growth. Additionally, EPI has outlined its proposed post-construction monitoring program for Project effects on soils in its Application and it stated that it would undertake more detailed soil assessments as required.

Within its application and supporting evidence, EPI stated its proposed measures, including contingency plans and its environmental inspection program, for mitigating Project effects on agricultural soils. The Board notes that it will discuss with EPI any outstanding issues that it may have regarding the EPP referred to in Section 9.4.

The Board does have concerns regarding EPI's proposed two year time frame for post-construction monitoring and is of the view that two years may not be an adequate time frame for assessing the effectiveness of EPI's mitigation for Project effects on soils. Should the Project be approved, the Board recommends that EPI be required to undertake such monitoring for a period of five years (Recommendation 3). Further, the Board would assess EPI's post-construction monitoring methodology and would discuss any outstanding issues with EPI. The Board is of the view that this monitoring program would be a valuable tool for assessing the potential effects of the Project on soil capability and the success of the mitigation applied.

Overall, the Board is satisfied with EPI's proposed mitigation for Project effects on agricultural soils capability and when considered with the Board's Recommendation 3, is of the view that the Project is not likely to cause significant adverse effects on agricultural soils. This conclusion pertains to soils on the lands of both MPLA/SAPL members and non-MPLA/SAPL members due to the sufficiency of mitigation proposed for each group of landowner members.

Evaluation of Significance

Frequency	Duration	Reversibility	Geographical Extent	Magnitude
Isolated	Short-term	Short to long term	Footprint	Low to medium
Adverse Effect				
Not likely to be significant				

Refer to Appendix 4 for definitions of the Evaluation of Significance Criteria

9.3.2.2 Potential Contamination of Wetlands and Aquifers Caused by an Accident or Malfunction of the LSr Pipeline During Operations

Background/Issues	The proposed LSr Pipeline would cross a number of wetlands and run over a number of aquifers. Concerns were raised by the public, including EC, with respect to the potential water contamination, including drinking water wells, in the event of a rupture or leak during the operational phase of the Project. Areas of primary concern to EC are the Oak Lake/Plum Lake complex, the Glenboro Marsh/Black Slough and the wetland basin at KP 1161. EC recommends the installation of isolation valves on the LSr Pipeline in the above-mentioned locations. EPI assessed the need for a specialized integrity assessment program (SIAP) that would encompass the design, construction and operation phases of the pipeline segments near the Oak Lake, Assiniboine and Winkler aquifers as well as the aquifer near the Swan Lake Indian Reserve No. 7. Upon questioning from the Board, EPI stated that the SIAP would be integrated into EPI's existing integrity management program (IMP). The IMP is a requirement for Board-regulated companies under the *Onshore Pipeline Regulations, 1999* (OPR-99).
Mitigation Measures	To mitigate potential effects on aquifers, pursuant to its existing IMP and its current practices for design and construction, EPI stated that it would undertake an evaluation of the following potential mitigative strategies and select measures appropriate for the proposed LSr Pipeline Project: ▪ increase the minimum depth of cover to 1.5 m to limit the potential for third party damage ▪ increase the frequency of internal corrosion checks; ▪ optimize valve location and spacing to limit the amount of product that could be released; ▪ increase the wall thickness of the pipe; and ▪ ensure adequate cathodic protection of the pipe. EPI has committed to conducting a feasibility assessment related to the installation of isolation valves on both sides of the wetland basin at KP 1161, the Demare Slough near KP 1149, the unnamed wetland near KP 1124, the Oak Lake/Plum Lake complex and the

	Glenboro Marsh/Black Slough complex. EPI stated that the requirements for determining where isolation valves should be installed is dependent on the topography of the line and if there are sensitive areas down slope of the pipeline. EPI has a series of programs in place to minimize a potential release, to monitor the pipeline system, and to respond in the event of a release. The LSr Pipeline will be hydrostatically tested prior to operation. As required by the OPR-99, EPI has an emergency response plan (ERP) in place that was developed to be consistent with industry standard publications such as Emergency Planning for Industry (CAN/CSA-Z731). The ERP will have measures in place to promptly and effectively respond to a release of product from the LSr Pipeline. EPI has committed to update its ERP to incorporate the LSr Pipeline. EPI will develop a plan to identify alternate water supplies and commits to provide alternate water sources to affected parties, if warranted, in the event of an accidental release of product that adversely affects an aquifer.
Monitoring	Included within EPI's IMP and other operational programs are requirements for in-line inspections for denting, corrosion and cracking and other forms of monitoring the integrity of the pipeline such as regular fly overs of the RoW.

Legend: ☐ Bio-Physical; ☐ Socio-Economic; ☐ Other

Views of the Board

The Board notes that the magnitude of a rupture or leak caused from an accident or malfunction could be extensive if the product from the pipeline entered sensitive water bodies or groundwater. However, the Board is of the view that EPI's commitment to operating the LSr Pipeline in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding, would minimize the likelihood of a rupture or leak from occurring. Further, EPI has committed to undertaking feasibility studies for the consideration of installing isolation valves adjacent to sensitive water areas, which may help mitigate negative effects in the event of a leak or rupture.

The Board notes that it would continue to monitor EPI's pipeline and facility IMP and other operational programs to ensure that they are adequate, that they are being implemented appropriately and that they are effective.

To further minimize the likelihood of a rupture or leak and ensure public safety, the Board is of the view that, in any authorization that may be granted, EPI should be directed to:

- develop and submit a joining program that includes welding and testing procedures and manuals;
- submit a comprehensive health and safety plan and field pressure testing program; and
- construct and operate the LSr Pipeline in accordance with the information referred to in its application.

Please refer to Recommendations (4), (5) and (6) in Section 9.7 for detailed wording.

Taking into account the programs in place and the proposed recommendations, the Board is of the view that this component of the Project is not likely to cause significant adverse

environmental effects as a result of accidents and malfunctions, since the likelihood of occurrence is very low.

Evaluation of Significance

Frequency	Duration	Reversibility	Geographical Extent	Magnitude
Accidental	Short-term	Short to long term	Footprint to region	High
Adverse Effect				
Not likely to be significant				

Refer to Appendix 4 for definitions of the Evaluation of Significance Criteria

9.3.2.3 Potential Contamination of the South Saskatchewan River Caused by an Accident or Malfunction of Line 13

Background/Issues	Line 13 currently handles crude oil which flows from Edmonton to the Canada/US Border. The proposed reversal would permit diluent to flow from the Canada/US Border to Edmonton. A number of concerns were raised by the public, including the Town of Outlook and the Meewasin Valley Authority, with respect to the effects of a spill or leak at the South Saskatchewan River pipeline crossing on the water supply of downstream users (*i.e.* local, Saskatoon and the Town of Outlook). EPI specified that diluent is a petroleum product. In comparison to typical crude oil, diluent disperses more readily and more is lost to evaporation upon a release. The EPI pipeline system in western Canada has for a number of years transported a variety of petroleum products including diluent products such as condensate. The toxicity and potential health effects from exposure to diluent are similar to other petroleum products transported in the EPI pipeline system.
Mitigation Measures	The Applicants stated that EPI's ERP is on file with the NEB. The ERP includes measures to prepare and respond in the event of a spill during pipeline operation. The Applicants stated that the ERP remains applicable for Line 13 operating in diluent service. The Applicants stated that EPI conducts bi-weekly aerial patrols of the pipeline system to check for any activities or situations that could affect the integrity of the pipelines (such as third party damage or bank erosion). The Applicants stated that EPI's control centre remotely monitors and controls the operation of the pipeline system using Supervisory Control and Data Acquisition systems. In the event of a pressure drop on the system indicating the possibility of a release, the operation of the pipeline can be suspended and operations personnel and equipment are deployed to the site.
Monitoring	Included within EPI's IMP and other operational programs are requirements for inline inspections for denting, corrosion and cracking and other forms of monitoring the integrity of the pipeline such as regular fly overs of the RoW.

Legend: ☐ Bio-Physical; ☐ Socio-Economic; ☐ Other

Views of the Board

As required by OPR-99, EPI has an ERP in place for the existing Line 13 crude oil service. The Board is of the view that the existing measures and monitoring undertaken by EPI would continue to be applicable during the operations for diluent service.

To further ensure public safety and minimize the likelihood of a rupture or leak at the South Saskatchewan River Crossing as well as elsewhere along the line, the Board is of the view that, in any authorization that may be granted, the Applicants be directed to:

- develop and submit a joining program that includes welding and testing procedures and manuals;
- operate Line 13 in accordance with the information referred to in its application;
- prior to placing Line 13 into diluent service, provide an engineering assessment in accordance with the Canadian Standards Association Z662-07, *Oil and Gas Pipeline Systems* which evaluates the pipeline's fitness for purpose, for the proposed reversal of flow;
- in the event that the Board is not satisfied that the engineering assessment demonstrates that Line 13 may safely commence operation in diluent service, ESL may be required to hydrotest all, or portions of Line 13; and
- after placing Line 13 into diluent service, ESL shall submit to the Board a revised engineering assessment to account for actual operating pressure profiles and pressure cycle data gathered since the reversal of flow.

Please refer to Recommendations (4), (6), (7), (8), and (9) in Section 9.7 for detailed wording.

Taking into account the programs in place and the proposed recommendations, the Board is of the view that this component of the Project is not likely to cause significant adverse environmental effects, as a result of accidents and malfunctions since the likelihood of occurrence is very low.

However, the Board recognizes concerns have been expressed about potential contamination of the water supply to downstream users, particularly to the City of Saskatoon and Town of Outlook. The Board is of the view that these concerns could be alleviated to a large extent if EPI could demonstrate that its emergency response measures will address potential contamination concerns. Therefore the Board is of the view that an emergency exercise should be undertaken for a potential rupture/leak at the South Saskatchewan River crossing to assess the effectiveness of the ERP to protect downstream water users.

Therefore, in any Order that the Board may issue, the Applicants would be directed to undertake an ERP exercise at the South Saskatchewan River Crossing. Please refer to Recommendation (10) in Section 9.7 for detailed wording.

Evaluation of Significance

Frequency	Duration	Reversibility	Geographical Extent	Magnitude
Accidental	Short-term	Short to long term	Footprint to region	High
Adverse Effect				
Not likely to be significant				

Refer to Appendix 4 for definitions of the Evaluation of Significance Criteria

9.4 Inspection

EPI stated that Environmental Inspectors would be assigned to the construction of the LSr Pipeline to ensure that proposed mitigative measures are properly implemented. In addition, EPI stated that appropriate Resource Specialists would be available onsite, when warranted, and would have expertise in the particular issues associated with the spread (*i.e.*, soil scientist, geotechnical engineer, wetland specialist, fisheries biologist, botanist, wildlife biologist, archaeologist, reclamation specialist, *etc.*). Overall, EPI committed to have a suitable number of Environmental Inspectors to provide an appropriate level of inspection. EPI further stated that training programs would be developed for all construction and inspection personnel to ensure that all individuals are aware of the environmental issues and their respective responsibilities.

During the course of the proceedings, the Board raised concerns that inspectors may have difficulty in performing their duties if they have to refer to a number of documents (*i.e.* application, supplementary submissions and manuals) to find mitigation commitments. Therefore, the NEB recommends that EPI consolidate all mitigation measures and commitments into an Environmental Protection Plan (EPP). Refer to Recommendation 11 in Section 9.7 for more details.

The Board also notes that pursuant to the NEB Act, the Board has its own inspection program and Board Environmental Inspectors are tasked with ensuring protection of property and the environment.

9.5 Cumulative Effects Assessment

The Applicants' cumulative effects assessment evaluated the adverse residual effects directly associated with the Project in combination with the adverse residual effects arising from other projects and activities that have been or will be carried out in the vicinity of the Southern Lights Project. The reader is referred to the Applicants' application for additional details on its cumulative effects assessment methodology.

9.5.1 Other Projects Interacting with the Southern Lights Project

Past, existing, and proposed projects or activities within and adjacent to the proposed corridor include, but are not limited to, oil and gas activity, roads, rail lines, agriculture, power lines, and wind generation projects. The predominant projects that the Applicants noted which could potentially interact with the Southern Lights Project include:

- existing EPI pipelines within the RoW that the LSr Pipeline would parallel;
- EPI's proposed Alberta Clipper Project that would parallel the LSr Pipeline route with a five-metre separation;
- EPI's proposed Southern Access Project;
- TransCanada Keystone's proposed oil pipeline where it crosses the LSr Pipeline route; and
- proposed wind generation projects in the vicinity of the LSr Pipeline route.

EPI's existing pipelines and its proposed Alberta Clipper Project are the projects most likely to result in direct cumulative environmental effects with the Southern Lights Project. The LSr Pipeline route would follow the same route as the Alberta Clipper pipeline from the Cromer Terminal to the Canada/US border.

9.5.2 Potential Cumulative Effects

The Applicants identified potential cumulative residual effects associated with the following elements:

- physical elements such as slope stability, soils, water quality and quantity, air quality including greenhouse gases, and acoustic environment;
- biological elements such as fish and fish habitat, wetlands, vegetation, wildlife and wildlife habitat, and species at risk;
- socio-economic elements such as human occupancy and resource use, heritage resources, traditional land and resource use, human health and infrastructure and services; and
- accidents and malfunctions.

The Applicants stated that its proposed Project-specific environmental protection and mitigative measures are sufficient to address potential cumulative effects and that the cumulative residual environmental and socio-economic effects associated with the construction and operation of the Project are not unlike those routinely encountered during pipeline and associated facility construction in an agricultural setting. However, as discussed in the following paragraphs, the Applicants also proposed to undertake specific mitigative measures to address cumulative effects related to certain bio-physical and socio-economic elements.

Soil Capability

The Applicants stated that the LSr Pipeline component of the Southern Lights Project would act cumulatively with previous disturbances and the Alberta Clipper Project in that an incremental change in soil capability would occur. Past activities which have affected soil capability are largely attributed to agricultural activities and previous pipeline construction programs. In addition, since the Alberta Clipper Project and the LSr Pipeline would share the same construction RoW, residual effects on soil arising from Alberta Clipper would be expected to act cumulatively with the LSr Pipeline. The Applicants noted that to a lesser extent, the LSr Pipeline

may also act cumulatively with the residual effects arising from the construction of the Keystone Pipeline Project but such effects would be limited to the segment where the LSr Pipeline and the Keystone pipeline intersect.

In its original application, the Applicants proposed construction of both the Southern Lights and Alberta Clipper projects to commence in late 2007 and extend until 2009.

In August 2007, the Applicants submitted a revised cumulative effects assessment considering the scenario that construction of the pipeline component of the Alberta Clipper Project from Cromer to the Canada/US border would be undertaken one year after construction of the LSr Pipeline component of the Southern Lights Project. The former would generally commence in summer 2009 and the latter in summer 2008.

If constructed on their own, the LSr and Alberta Clipper pipelines would be constructed with a 5 m separation and each would require a 40 m wide construction RoW. However, since the two projects would parallel one another and be constructed within a year of each other, the rights-of-way and temporary workspace would be shared and overlapping. Thus, the total construction RoW width for both pipelines would be 45 m.

To minimize topsoil handling and therefore reduce the potential of topsoil and subsoil mixing, the Applicants proposed to leave the topsoil in rows along the RoW in between the two periods of construction to avoid disturbing the topsoil twice. Measures would be taken to stabilize the topsoil and prevent wind erosion and weed infestation. However, the Applicants also stated that if it was the landowner's preference, it would replace the topsoil at the end of the first construction season and that in either case, landowners would be compensated appropriately. Final clean-up and reclamation of the combined construction RoW would generally be conducted in the late fall 2009.

The Applicants further noted that its proposed soil handling methods would also result in overall decreased disturbance, which in turn would result in reduced effects on other elements such as wildlife and vegetation and decrease the potential for the spreading of weeds.

Other Biophysical and Socio-Economic Elements

The Applicants also proposed to install the LSr and Alberta Clipper pipelines simultaneously during construction of the LSr Pipeline component of the Southern Lights Project at certain locations in order to minimize disturbance. These locations include several potentially sensitive watercourse crossings, the Glenboro Marsh / Black Slough wetland complex (KP 1106.9 to KP 1114.5), and within the town of Morden (KP 1195.9 to KP 1197). The Applicants submitted that co-construction of the pipelines through these areas would likely result in reduced cumulative adverse effects on water quality and quantity, fish and fish habitat, wetlands, vegetation and wildlife, including species at risk, and other land uses in the Morden area.

9.5.3 Applicants' Conclusion

The Applicants submitted that with the implementation of its proposed mitigative strategies, the potential cumulative adverse residual effects associated with the construction and operation of the Project on biophysical and socio-economic elements would not be likely to be significant.

9.5.4 Views of the Board

The Applicants proposed concurrent construction of the Alberta Clipper and Southern Lights projects at certain locations is likely to result in reduced environmental effects on water quality and quantity, fish and fish habitat, wetlands, vegetation and wildlife, including species at risk, and other land uses in the Morden area. Further, the Applicants soil handling plans to accommodate both projects would lessen potential adverse effects on soil capability. Co-construction of the projects would result in less overall temporal and spatial disturbance on these environmental elements and is the preferred approach should both projects be approved. However, the Board is also of the view that the Applicants' proposed project-specific environmental protection and mitigation measures are sufficient such that cumulative adverse environmental effects resulting from the projects are not likely to be significant in the event that stripping and topsoil replacement or co-construction of the pipes cannot occur at the same time.

The Board is of the view that, taking into consideration the Applicants' proposed Project-specific mitigation measures, its additional measures proposed to further mitigate cumulative effects, and the recommendations referred to in Section 9. 7, the Project would not likely result in significant adverse cumulative environmental effects in combination with other projects or activities that have been or will be carried out.

9.6 Follow-Up Program

The Project and its associated activities are generally routine in nature and the potential adverse environmental effects of the Project are expected to be similar to those of past projects of a similar nature in a similar environment. For this reason, the NEB is of the view that a follow-up program pursuant to the CEA Act would not be appropriate for this Project.

However, it is recommended that the Applicants undertake detailed post-construction monitoring as discussed in sections 9.3.1.2 and 9.3.2.

9.7 Recommendations

It is recommended that, in any authorization that the NEB may grant, a condition be included requiring the Applicants to carry out all of the environmental protection and mitigation measures outlined in its application and subsequent submissions.

Further, other recommendations include:

(1) EPI shall:

(a) file with the Board, at least 60 days prior to the commencement of construction, the results of the archaeological and paleontological investigations; and

(b) include the recommendations resulting from the archaeological and paleontological investigations, including those for the Thornhill Burial Mounds, in the EPP.

If appropriate, EPI may file the results related to the LSr Station Facilities and the LSr Pipeline excluding the LSr Station Facilities separately. If filed separately, the results for

the LSr Station Facilities must be filed at least 60 days prior to the commencement of construction of those facilities. The results for the LSr Pipeline excluding the LSr Station Facilities must be filed at least 60 days prior to the commencement of the construction of the LSr Pipeline excluding the LSr Station Facilities.

(2) EPI shall, in the event that previously unidentified archaeological or heritage resources are discovered:

(a) immediately cease work at the location of the discovery and notify responsible provincial authorities; and

(b) resume work only after approval is granted by the responsible provincial authority.

(3) On or before the 31 of January of each of the first 5 years following the commencement of the operation of the LSr Pipeline, EPI shall file with the Board, and make available on its website for informational purposes, a post-construction environmental report that:

(a) identifies on a map or diagram the location of any environmental issues which arose during construction;

(b) discusses the effectiveness of the mitigation applied during construction and the methodology used to assess the effectiveness of mitigation;

(c) identifies the current status of the issues identified (including those raised by landowners), and whether those issues are resolved or unresolved; and

(d) provides proposed measures and timelines EPI shall implement to address any unresolved concerns.

The report shall address, but not be limited to, issues pertaining to soil productivity on cultivated lands, weeds, reclamation of native prairie, water course crossings, and plant species of special concern.

(4) EPI shall develop joining programs for: the LSr Pipeline (excluding the LSr Station Facilities); the LSr Station Facilities; and Line 2. ESL shall develop the joining program for Line 13 Reversal. Both shall file these with the Board at least 60 days prior to commencement of any welding activities to which the programs relate. The joining programs shall include:

(a) requirements for the qualification of welders;

(b) requirements for the qualification and duties of welding inspectors;

(c) the welding techniques and processes EPI/ESL would be using;

(d) the welding procedure specifications and procedure qualification records;

(e) the welding procedure specifications for welding on in-service pipelines (where applicable);

(f) the non-destructive examination (NDE) procedures, and supporting procedure qualification records, which detail the ultrasonic and/or radiographic techniques and processes EPI/ESL would be using, for each welding technique;

(g) the defect acceptance criteria for each type of weld (i.e. production, tie-in and repair);

(h) an explanation of how the defect acceptance criteria were determined; and

(i) any additional information which supports the joining program.

(5) EPI shall file with the Board the following programs and manuals within the time specified:

(a) comprehensive health and safety plan related to the LSr Station Facilities – at least 60 days prior to construction of the LSr Station Facilities;

(b) comprehensive health and safety plan related to the LSr Pipeline excluding the LSr Station Facilities – at least 60 days prior to construction of the LSr Pipeline excluding the LSr Station Facilities; and

(c) field pressure testing program for the LSr Pipeline – at least 14 days prior to pressure test.

(6) EPI shall cause the approved Project to be designed, located, constructed, installed, and operated in accordance with the specifications, standards and other information referred to in its application or as otherwise agreed to during the OH-3-2007 proceeding.

(7) ESL shall file with the Board for approval, at least 9 months prior to placing Line 13 into diluent service, an engineering assessment (EA) in accordance with the Canadian Standards Association Z662-07, *Oil and Gas Pipeline Systems* which evaluates the pipeline's fitness for purpose, for the proposed reversal of flow. The EA shall account for, but not be limited to:

(a) a comparison of excavation findings with associated results from all crack in-line inspections (ILI) performed during current service, and with associated results from the most recent geometry ILIs;

(b) a confirmation of the accuracy of the ILI tools, or measures undertaken to mitigate potential inaccuracies;

(c) the pipeline condition after completion of repairs, including type and dimensions of remaining crack and geometry features;

(d) a comparison of operation prior to reversal versus future service conditions, including cyclical loading estimates;

(e) the estimated defect growth and time until failure, once Line 13 is reversed;

(f) pipe design and material properties (such as toughness) of the various Line 13 portions;

(g) transient analyses completed on Line 13;

(h) consequences of failure, with regard to pipe properties described in (f); and

(i) other potential hazards that may be aggravated by the proposed reversal of Line 13.

(8) In the event that the Board is not satisfied that the engineering assessment demonstrates that Line 13 may safely commence operation in diluent service, ESL shall be required to hydrotest all, or portions of Line 13. If hydrotesting is required, ESL shall file with the Board for approval its Pressure Testing Program at least four weeks prior to the commencement of pressure testing activities.

(9) No later than 6 months after placing Line 13 into diluent service, ESL shall submit to the Board a revised engineering assessment to account for actual operating pressure profiles and pressure cycle data gathered since the reversal of flow. As part of ESL's engineering assessment, estimated defect growth rates and in-line inspection intervals shall be adjusted accordingly.

(10) Within 6 months after commencement of operation of Line 13 in diluent service:

(a) ESL shall conduct an emergency response exercise at its South Saskatchewan River crossing and relevant downstream control points with the objectives of testing:

- emergency response procedures, including response times;
- training of company personnel;
- communications systems;
- response equipment;
- safety procedures; and
- effectiveness of its liaison and continuing education programs.

(b) ESL shall notify the Board, at least 30 days prior to the date of the emergency response exercise, of the following:

- the date(s) and location(s) of the exercise;
- the type of exercise;
- the exercise scenario;
- the proposed participants in the exercise;
- the objectives of the exercise; and
- the evaluation criteria.

(c) ESL shall file with the Board, within 60 days after the emergency response exercise outlined in (a), a final report on the exercise including:

- the results;
- how objectives were achieved;
- areas for improvement; and

- steps to be taken to correct deficiencies.

(11) EPI shall file with the Board for approval, at least 60 days prior to construction, an updated project-specific Environmental Protection Plan (EPP). The EPP shall describe all environmental protection procedures, and mitigation and monitoring commitments, as set out in EPI's application or as otherwise agreed to during questioning, in its related submissions or through consultations with other government agencies. Construction shall not commence until EPI has received approval of its EPP from the Board. If appropriate, the Applicants may submit two separate EPPs, one for the LSr Pipeline excluding the LSr Station Facilities and the other for the LSr Station Facilities.

10.0 THE NEB'S CONCLUSION

The NEB is of the view that with the implementation of the Applicants' environmental protection procedures and mitigation measures and the NEB's recommendations, the proposed Project is not likely to cause significant adverse environmental effects.

This ESR was approved by the NEB on the date specified on the cover page of this report under the heading CEA Act Determination Date.

11.0 NEB CONTACT

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APPENDIX 1 SCOPE OF THE ENVIRONMENTAL ASSESSMENT (AS DETERMINED IN JUNE 2007)

National Energy Board

Office national de l'énergie

File OF-Fac-Oil-E242-2007-01 01
6 June 2007

To: Distribution List

Enbridge Southern Lights Limited Partnership (ESL) and Enbridge Pipelines Inc. (EPI)
Proposed Southern Lights Pipeline Project
Scope of the Environmental Assessment Pursuant to the
Canadian Environmental Assessment Act

On 27 April 2007, the National Energy Board (the Board) requested comments from the public on the draft scope of environmental assessment for the proposed Southern Lights Pipeline Project.

The Board received a letter of comment from the Meewasin Valley Authority, which posed the following question in the context of the cumulative effects assessment related to the Project: "Does the phrase "other projects" include all existing pipelines that have been constructed within the right-of-way, regardless of ownership?" The Board is of the view that the phrase "other projects" in factor (a) of Section 2.2 of the Scope of the Environmental Assessment includes all existing pipelines, regardless of ownership, that may be the source of environmental effects that may potentially interact with the environmental effects of the proposed Southern Lights Pipeline Project. Therefore, the Scope, as drafted, will adequately consider the cumulative environmental effects of accidents and malfunctions that are likely to result from the Southern Lights Pipeline Project in combination with other projects or activities that have been or will be carried out.

The Board also received a letter of comment from the Roseau River Anishinabe First Nation (RRAFN). The RRAFN stated that the Southern Lights Pipeline Project adversely affects the "constitutionally protected s. 35 interests of the RRAFN" and registered its concern that appropriate consultation be carried out. The RRFAN did not, however, provide information on the specific interests adversely impacted by the proposed Project and did not suggest any changes to the draft Scope. As a result, the Board is of the view that it is not necessary to make any changes to the draft Scope based upon the comments of the RRAFN. The Board notes that the CEA Act mandates consideration of any change that the Project may cause in the environment and any impact of such a change on the current use of lands and resources for traditional purposes by Aboriginal peoples. It also requires the consideration of mitigation measures proposed to minimize any such impact. These requirements have been incorporated into the Scope. Furthermore, the impacts of the Project on Aboriginal peoples is also a specific issue in the public hearing process that has been established in respect of the Project.

... 2

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Accordingly, in response to the comments received, the Board has not made any changes to the draft Scope. The Board also notes that the Board, Transport Canada and Indian and Northern Affairs Canada are responsible authorities (RAs) pursuant to the *Canadian Environmental Assessment Act* for the proposed Project and the RAs have determined the scope of the environmental assessment, as attached to this letter.

The Board notes that the IRRFAN has been forwarded a copy of the Hearing Order issued in relation to the Southern Lights Pipeline Project, which outlines in detail the various means of participating in the NEB proceeding.

Yours truly,

David Young
Acting Secretary

Enbridge Southern Lights Limited Partnership and
Enbridge Pipelines Inc.
Proposed Southern Lights Pipeline Project
Scope of the Environmental Assessment Pursuant to the
Canadian Environmental Assessment Act

1.0 INTRODUCTION

Enbridge Southern Lights Limited Partnership (ESL) and Enbridge Pipelines Inc. (EPI) are proposing to construct and operate the Southern Lights Pipeline Project (the Project). A Certificate of Public Convenience and Necessity pursuant to section 52 and Orders pursuant to section 58 of the *National Energy Board Act* (NEB Act) to construct and operate the proposed Project would be required and the project would be subject to an environmental screening under the *Canadian Environmental Assessment Act* (CEA Act).

On 14 November 2006, Enbridge filed a Preliminary Information Package with the Board regarding the proposed Project. The intent of the Preliminary Information Package was to initiate the environmental assessment (EA) process pursuant to the CEA Act. The following departments subsequently identified themselves as having responsibilities or an interest under the CEA Act in the EA of the proposed Southern Lights Pipeline Project:

- National Energy Board – required to conduct an EA under the CEA Act (Responsible Authority (RA))
- Transport Canada, Navigable Waters – RA
- Indian and Northern Affairs Canada – RA
- Environment Canada – in possession of specialist or expert information or knowledge (Federal Authority (FA))
- Health Canada - FA
- Department of Fisheries and Oceans – FA
- Natural Resources Canada - FA

The Provinces of Manitoba and Saskatchewan also expressed an interest in monitoring and participating in the EA coordination process although Provincial EA legislation is not triggered.

The Canadian portion of the Project would consist of three components. The Project would include conversion of Line 13 from crude oil service to diluent service and reversal of Line 13 to allow flow from the Canada - United States (US) border near Gretna, Manitoba (MB) to Edmonton, Alberta (AB). The Project would also involve construction of approximately 286 km of new 508 mm (NPS 20-inch outside diameter) light sour (LSr) crude oil pipeline from Cromer, MB to the Canada - US border near Gretna, MB. The Project also includes the modification of certain Line 2 pump stations and the addition of drag reducing agent (DRA) injection systems between Edmonton, AB and Canada - US border near Gretna, MB. Approximately 8 km of new right of way (RoW), not contiguous with or alongside existing RoW, would be required for the new pipeline facilities. Construction of the new pipeline facilities would require the crossing of

11 named watercourses, including the Souris and Cypress Rivers. There may also be other related physical works and activities associated with the Project.

The scope of the EA was established in accordance with the CEA Act and the CEA Act *Regulations Respecting the Coordination by Federal Authorities of Environmental Assessment Procedures and Requirements* which state that the RAs shall establish the scope of the EA after consulting with FAs. The Provinces of Manitoba and Saskatchewan also reviewed the draft scope.

2.0 SCOPE OF THE ASSESSMENT

2.1 Scope of the Project

The scope of the Project as determined for the purposes of the EA includes the various components of the Project as described by ESL and EPI in their 14 November 2006 Preliminary Information Package and 9 March 2007 Application, submitted to the National Energy Board.

The scope of the Project includes construction, operation, maintenance and foreseeable changes, and where relevant, the abandonment, decommissioning and rehabilitation of sites relating to the entire Project, and specifically, the following physical works and activities:

Line 13 Reversal

- Enbridge's existing Line 13 would be reversed from the Canada – US border near Gretna, MB to Edmonton, AB to allow for a south to north flow. This reversal would allow the redeployment of Line 13 from crude oil service to diluent service. No new diluent pipeline construction would be required in Canada.
- Modifications to 17 existing pump stations on Line 13 in AB, SK and MB. Sixteen of these stations would be modified for reverse flow service and one station in Edmonton, AB would be redeployed.
- The installation of DRA skids within existing station boundaries at 4 existing line 13 pump stations.

Light Sour Crude Pipeline

Construction of approximately 286 km of a new 29,500 M^3/day (185,000 bbl/day), 508 mm (NPS 20-inch OD) light sour crude oil pipeline from Cromer, MB to the Canada - US border near Gretna, MB The construction in Canada would be in or alongside and contiguous to existing EPI right of way (RoW) for almost its entire length. Approximately 8 km of new non-contiguous RoW would be required. Three new pumping units would be required and each would be located within existing Enbridge pump station boundaries.

Line 2 Modifications

Modifications to certain of EPI's existing Line 2 pump stations between Edmonton, AB and the Canada – US border near Gretna, MB specifically:

- replacement of 17 Line 2 pumps and motors at existing pump stations.
- The addition or recommissioning of DRA skids within existing station boundaries at 22 existing Line 2 pump stations.

Related Undertakings and Activities

Staging areas, temporary construction workspace, access roads, any required work camps, and equipment laydown areas are also included in the scope of the Project.

It should be noted that any additional modifications or decommissioning/abandonment activities would be subject to future examination under the NEB Act and consequently, under the CEA Act, as appropriate. Therefore, at this time, these activities will be examined in a broad context only.

Navigable Watercourse Crossings

Additionally, for greater clarity, the Scope of the Project includes the crossings of navigable watercourses.

2.2 Factors to be Considered

The EA will include a consideration of the following factors listed in paragraphs 16(1)(a) to (d) of the CEA Act:

(a) the environmental effects of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out;

(b) the significance of the effects referred to in paragraph (a);

(c) comments from the public that are received during the environmental assessment process; and

(d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Project.

In addition, pursuant to paragraph 16(1)(e), the EA will consider alternative means of carrying out the Project that are technically and economically feasible and the environmental effects of any such alternative means.

For further clarity, subsection 2(1) of the CEA Act defines 'environmental effect' as:

a) any change that the project may cause in the environment, including any change that the project may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species as defined in the *Species at Risk Act*;
b) any effect of any change referred to in paragraph (a) on
    i. health and socio-economic conditions,
    ii. physical and cultural heritage,
    iii. the current use of lands and resources for traditional purposes by aboriginal persons,
    iv. any structure, site or thing that is of historical, paleontological, or architectural significance; or
c) any change to the project that may be caused by the environment, whether any such change or effect occurs within or outside Canada.

2.3 Scope of Factors to be Considered

The EA will consider the potential effects of the proposed Project within spatial and temporal boundaries within which the Project may potentially interact with, and have an effect on components of the environment. These boundaries will vary with the issues and factors considered, and will include:

- construction, operation, decommissioning, site rehabilitation and abandonment or other undertakings that are proposed by the Proponent or that are likely to be carried out in relation to the physical works proposed by the Proponent, including mitigation and habitat replacement measures;
- the natural variation of a population or ecological component;
- the timing of sensitive life cycle phases of wildlife species in relation to the scheduling of the Project;
- the time required for an effect to become evident;
- the time required for a population or ecological component to recover from an effect and return to a pre-effect condition, including the estimated degree of recovery;
- the area affected by the Project; and
- the area within which a population or ecological component functions and within which a Project effect may be felt.

For the purpose of the assessment of the cumulative environmental effects, the consideration of other projects or activities that have been or will be carried out will include those for which formal plans or applications have been made.

APPENDIX 2 LOCATIONS OF PROPOSED WORK/ACTIVITIES AT EXISTING PUMP STATIONS

Pump Station	Line 2 Modifications	LSr Pipeline	Line 13 Reversal
Edmonton	■		■
Kingman	■		■
Strome	■		
Hardisty	■		■
Metiskow	■		■
Cactus Lake	■		
Kerrobert	■		■
Herschel	■		■
Milden	■		
Loreburn	■		■
Craik	■		■
Bethune	■		
Regina	■		■
White City	■		
Odessa	■		■
Glenavon	■		■
Langbank	■		■
Cromer	■	■	■
Souris	■		■
Glenboro	■	■	■
St.Leon			■
Manitou	■	■	
Gretna	■		■

APPENDIX 3 COMMENTS ON THE DRAFT ESR

Agencies	Comments	Section in ESR where wording was modified	Explanation on why change was not made to the ESR
TC	TC specified revisions to existing wording on TC's mandate and the scope of its analysis	Revisions made to Section 3.1	n/a
INAC	INAC recommended that the following information be provided: regulations governing the disposal of water-methanol; qualification and training requirements for personnel during operations; and the seasons when surveys took place. INAC also recommended that the Applicants should continue discussions with the Swan Lake First Nations regarding potential impacts on its membership	n/a	These issues have been addressed in the draft ESR, as written, other submissions from the Applicants, or can be addressed through existing regulatory requirements.
INAC	INAC proposed wording changes to the scope of the environmental assessment	n/a	The scope of the environmental assessment was established by the RAs on 6 June 2007.
EC	EC stated that it is satisfied with the current ongoing process with EPI to redress the loss of wetland function.	This comment was added to section 9.3.1.1	n/a
EC	Regarding the submission of some field surveys 10 days prior to construction, EC stated that it concurs with the Board's position that the results of the surveys must be evaluated, and mitigation strategies committed, prior to the commencement of construction.	This comment was added to section 9.3	n/a
EC and MWS	EC and MWS stated that they concur with the Board's recommendation of a five-year post-construction monitoring program.	These comments were added to section 9.3.1.2	n/a
EC	EC stated that it preferred a reroute, or alternatively, installation of isolation valves in the vicinity of specific wetlands (i.e. Oak Lake/Plum Lake, Glenboro Marsh, KP 1161, Demare Slough and KP 1124), as the potential for oil spills in wetlands is of significant concern.	n/a	The Applicants responded to this concern by stating that they have committed to run the Intelligent Valve Placement model with consideration of the wetlands and to discuss the outcomes of the model with EC. In previous submissions, the Applicants stated that a formal risk reduction review has been completed and feasibility assessments are under review to determine the optimal valve location and spacing to reduce volume out in the event that a release occurs in high consequence areas. The Board notes that the placement of

Agencies	Comments	Section in ESR where wording was modified	Explanation on why change was not made to the ESR
			isolation valves, if any, would be based on additional engineering considerations including the Applicants' formal risk reduction review and its Intelligent Valve Placement model. The Board further notes that, through its ongoing environmental oversight during the construction and operational phases of the Project, the Board would maintain ongoing contact with the Applicants and EC to obtain their views on the location of isolations valves.
DFO	DFO recommended revised figures for the number of watercourses with potential to support spring spawning sports fish and the number of undefined drainages.	Revisions were made to Section 6.1.	
DFO	DFO recommended adding two additional project-environment interactions within the fish and fish habitat entry: (1) bank instability at the crossing sites leading to bank erosion; and (2) disruption of fish habitat at the crossing sites during isolation of the sites).	The first recommended interaction was added within Section 9.2.	The second recommended interaction was not added since it is implicitly addressed through existing wording.
DFO	DFO noted that the species of special concern discovery contingency plans were not elaborated upon in Section 9.3.1 and that a "program mechanism" for conveyance of information from field surveys to key personnel was not explained. DFO also commented that crossings may take place outside frozen and dry stream crossing timeframes.	n/a	The issues have been already addressed in the draft ESR, as written, or other submissions from the Applicants, therefore, changes were not made. Further, the Board notes that EPI has stated in its submissions that it is maintaining ongoing consultations with DFO and MWS, that it would adhere to all approvals, permits and authorizations issued by regulatory authorities and that any alternatives or alterations to crossing requirements specified in approvals, permits and authorizations must be approved prior to the commencement of crossing activities.
HC	HC stated that it was unclear from the ESR as to whether any assessment was undertaken for naturally occurring radioactive materials (NORMs) for the construction and operation phases of the Project.	n/a	The Applicants stated that it considered available information and determined that NORMs are not a concern for this Project. The Board is satisfied with the Applicants assessment in this regard.
HC	HC recommended that noise from all phases of the Project be added as a potential Project-environment interaction under the Environmental Element category of "Human Health".	Revisions were made to Sections 7.2, 9.2, 9.3.1.1.	n/a

Agencies	Comments	Section in ESR where wording was modified	Explanation on why change was not made to the ESR
HC	HC recommended clarification of whether compliance with ERCB Directive 038: Noise Control also includes modified existing pumps and motors in addition to the new ones.	Revision was made to Section 5.2.	n/a
HC and MIA	HC and MIA expressed concern that the ERCB Directive 038: Noise Control appears only to have regulatory authority in Alberta and HC stated that the Directive is not applicable to construction noise. HC recommended that the Directive also be adhered to for the construction phase of the Project.		Although the Directive focuses on the operations phase of the Project, the Applicants have provided standard mitigation measures to address noise during construction. As the Applicants have committed to the Directive for the whole Project, the Applicants would be in non-compliance with their commitment if they were not meeting the guidelines of the Directive in any of the three provinces where the Project is located.
MC	MC commented on consultation with Aboriginal communities.	n/a	These comments do not alter the analysis set out in the draft ESR within Section 9.3.1.1 under the "Disruption or inability to carry on traditional activities".
MWS	MWS recommended the inclusion of "water course crossings" as part of the post-construction environmental report.	Revision was made to Section 9.7.	n/a
MWS	MWS identified "blasting" and "hydrostatic testing" as a Project/environment interaction.	Revision was made to Section 9.2.	n/a
MWS	MWS discussed potential effects of the Project on important wetland and fisheries habitat along the proposed route. MWS also highlighted provincial permitting obligations.	n/a	The Board notes that the Applicants' will be required to obtain any necessary provincial authorizations for the Project.
Applicants	The Applicants recommended: inserting updated information for the "Terrain and Soils" and "Wetlands" descriptions; deleting some wording within the "Disturbance to agricultural and ranching operations" entry for clarification purposes; and including the use of hot water as an alternative to water-methanol mixture for hydrostatic testing of the pipelines within the Description of the Project section.	Revisions were made to Sections 5.1, 6.1 and 9.3.1.1.	n/a

n/a - not applicable

APPENDIX 4 SIGNIFICANCE CRITERIA DEFINITIONS

The table below defines the criteria used by the NEB for evaluating the significance of the effects discussed in Section 9.3.2. These criteria and definitions are largely based on information used by the Applicants. However the NEB added its own criteria, Evaluation of Significance, and included a corresponding definition.

Criteria	Definition
Frequency (how often would the event that caused the effect occur)	**Accidental**: Occurs rarely over assessment period **Isolated**: Confined to specified period **Occasional**: Occurs intermittently and sporadically over assessment period **Periodic**: Occurs intermittently but repeatedly over the construction and operations period **Continuous**: Occurs continually over the construction and operations period
Duration (period of the event causing the effect)	**Immediate**: Event duration is limited to less than or equal to two days **Short-term**: Event duration is longer than two days but less than or equal to one year. **Medium-term**: Event duration is longer than one year but less than or equal to ten years **Long-term**: Event duration extends longer than ten years
Geographic Extent	**Footprint**: The land area disturbed by the Project, construction and reclamation activities, including associated physical works and activities (*i.e.*, permanent pipeline RoW, temporary construction workspace, temporary stockpile sites, temporary staging areas, facility sites) **Local**: The area which could potentially be affected by construction and reclamation activities beyond the construction RoW including associated physical works and activities. The local boundary varies with the discipline and issue being considered (*e.g.*, for assessment of the effects of noise on wildlife, the area affected by noise (*i.e.*, 2 km buffer) from the source is included in this boundary) **Region**: The area extending beyond the local boundary. The boundary for the region also varies with the discipline and the issue being considered (*e.g.*, for socio-economic analysis, regional boundaries include large communities that will be used as construction offices or regional municipal district boundaries) **Province**: The area extending beyond regional or administrative boundaries, but confined to Manitoba, Saskatchewan or Alberta (*e.g.*, provincial permitting boundaries, etc.) **Transboundary**: The area extending outside Canada
Reversibility	**Immediate**: Effect is alleviated in less than or equal to two days **Short-term**: Greater than two days and less than or equal to one year to reverse effect **Medium-term**: Greater than one year and less than or equal to ten years to reverse effect **Long-term**: Greater than ten years to reverse effects **Permanent**: Residual effects are irreversible
Magnitude	**Negligible**: Residual effects are not detectable **Low**: Potential effects are detectable, but well within environmental and/or social standards or tolerance **Medium**: Potential effects are detectable and approaching, but below environmental and/or regulatory standards or tolerance **High**: Potential effects are beyond environmental and/or social standards or tolerance
Evaluation of Significance	"**Likely to be significant**" would typically involve effects that are: high probability, irreversible, regional in extent and/or of high magnitude